MP3 CD Sound Machine

AZ 2558

all versions

Service
Service
Service

Service Manual

MP3-CD PLAYBACK MP3 | ReWritable CD COMPATIBLE | COMPACT disc DIGITAL AUDIO

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**CLASS 1
LASER PRODUCT**

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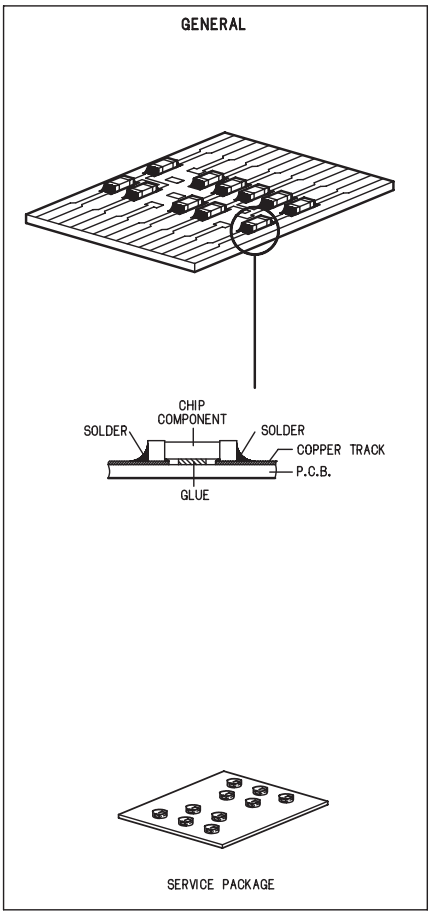
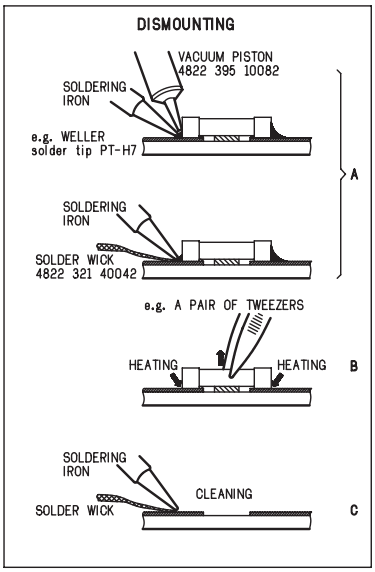
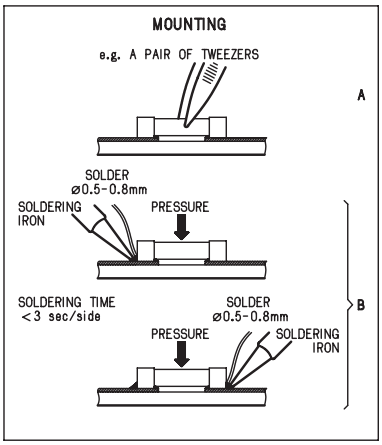
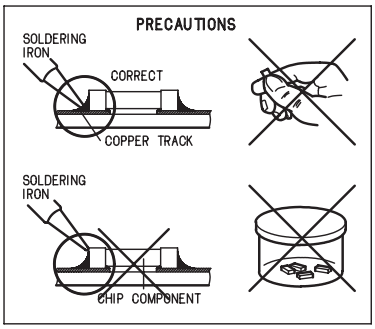
PHILIPS

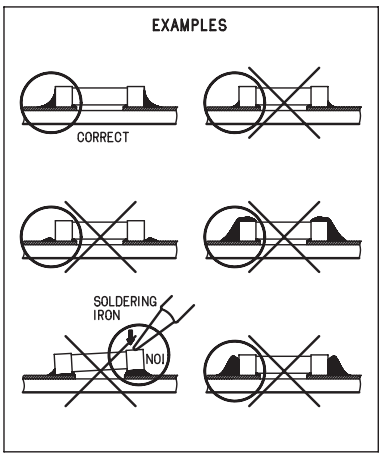
HANDLING CHIP COMPONENTS











(GB) WARNING
All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wristband with resistance. Keep components and tools at this potential.

ESD

(NL) WAARSCHUWING
Alle IC´s en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen vermindern. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(F) ATTENTION
Tous les IC et beaucoup d´autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévite pourrait être considérablement écourtée par le fait qu´aucune précaution nést prise à leur manipulation.
Lors de réparations, s´assurer de bien être relié au même potentiel que la masse de l´appareil et enfileer le bracelet serti d´une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l´on utilise soient également à ce potentiel.

(D) WARNUNG
Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.
Sorgen Sie dafür, daß Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(I) AVVERTIMENTO
Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparationi occorre quindi essere collegato allo stesso potenziale che quello della massa delápparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

SAFETY

(GB)
Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.
Safety components are marked by the symbol ⚠

(NL)
Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.
De Veiligheidsonderdelen zijn aangeduid met het symbool ⚠

(F)
Les normes de sécurité exigent que l`appareil soit remis à l`état d`origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.
Les composants de sécurité sont marqués ⚠

(I)
Le norme di sicurezza estigono che l´apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati.
Componenty di sicurezza sono marcati con ⚠

(D)
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Originalersatzteile zu verwenden.
Sicherheitsbauteile sind durch das Symbol ⚠ markiert.

CLASS 1
LASER PRODUCT

(GB) **DANGER**: Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.

(S) Varning !
Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

(DK) Advarsel !
Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

(FIN) Varoitus !
Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen !

(GB)
After servicing and before returning the set to customer perform a leakage current measurement test from all exposed metal parts to earth ground, to assure no shock hazard exists.
The leakage current must not exceed 0.5mA.

(F)
"Pour votre sécurite, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

TECHNICAL SPECIFICATIONS

GENERAL

Mains voltage	-/00C/05	:	230 V
	-/17	:	120 V
	-/01	:	120V/230 V
Mains frequency	-/00C/05	:	50 Hz
	-/17	:	60 Hz
	-/01	:	60 Hz/50 Hz
Battery	mains	:	12 V (R20 x 8)
Power consumption		:	< 5 W typ.
Dimension (W x H x D)		:	567 x 185 x 301 mm
Weight		:	5.6 Kg

AMPLIFIER & LS WOOX

Output power	mains	:	2 x 8.8 W
	battery	:	2 x 8 W
Residual noise		:	60nW (volume minimum)
Channel difference		:	3dB typ. at 500mW
Hum & noise		:	500nw (Vol.max.-20dB)

TUNER - FM SECTION

Tuning range	:	87.5 - 108 MHz
IF frequency	:	10.7 MHz ±0.02MHz
Sensitivity	:	< 25 dBf at 26dB S/N
Selectivity	:	> 20 dB at S9/300kHz
IF rejection	:	> 50 dB
Image rejection	:	> 20 dB

TUNER - MW SECTION

Tuning range		:	531 - 1602 kHz
	-/17	:	530 - 1700 kHz
IF frequency		:	450 kHz ± 1 kHz
Sensitivity		:	< 5000 μV/m at 26dB S/N
Selectivity		:	> 16 dB at S9/300kHz
IF rejection		:	> 24 dB
Image rejection		:	> 28 dB

USB FUNCTION

Channel balance		:	±2dB typ.
THD		:	< 3%
Crosstalk	0dB,1 kHz	:	> 26 dB
Crosstalk	0dB,10 kHz	:	> 16 dB
Frequency response		:	±1dB typ. (63 Hz- 14kHz)
SNR unwtd.		:	> 50 dB
Channel difference		:	< 3 dB

COMPACT DISC

SNR unwtd.		:	> 50 dB
Channel difference		:	< 3 dB
Crosstalk	1 kHz	:	> 26 dB
Crosstalk	10 kHz	:	> 16 dB
Frequency response (500mW output)		:	0dB typ. at 100Hz
Frequency response (500mW output)		:	-1dB typ. at 10kHz
THD (1kHz,-6dB)		:	0.2% typ.
THD (10kHz,-20dB)		:	<3%
Shock resistance	±Z axis	:	> 2 g
	±X or ±Y axis	:	> 3 g

SERVICE TOOLS

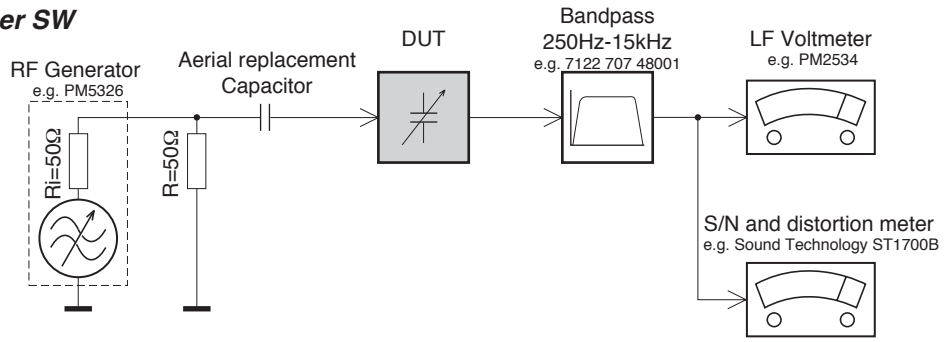
Audio signal disc SBC 429.....4822 397 30184
Playability test disc SBC 444.....4822 397 30245
Test disc 5 (disc without errors) +
Test disc 5A (disc with dropout errors, black spots and fingerprints)
SBC 426/426A.....4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30 dB level without “pause”).....4822 397 30155

AVAILABLE ESD PROTECTION EQUIPMENT

anti-static table mat	large 1200x650x1.25mm	4822 466 10953
	small 600x650x1.25m	4822 466 10958
anti-static wristband		4822 395 10223
connection box (3 press stud connections, 1MΩ)		4822 320 11307
extendible cable (2m, 2MΩ, to connect wristband to connection box)		4822 320 11305
connecting cable (3m, 2MΩ, to connect table mat to connection box)		4822 320 11306
earth cable (1MΩ, to connect any product to mat or to connection box)		4822 320 11308
KIT ESD3 (combining all 6 prior products - small table mat)		4822 310 10671
wristband tester		4822 344 13999

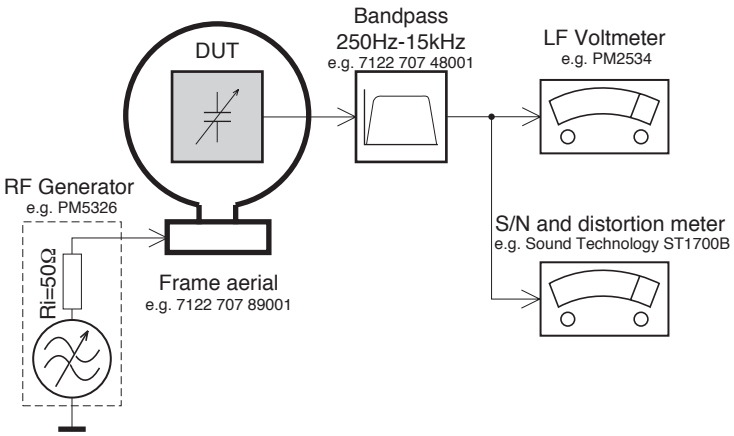
SERVICE MEASUREMENT

Tuner SW



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday´s cage.
Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

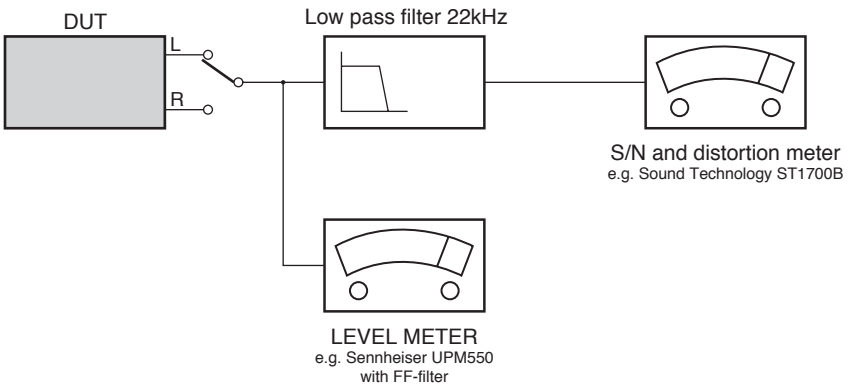
Tuner AM (MW,LW)



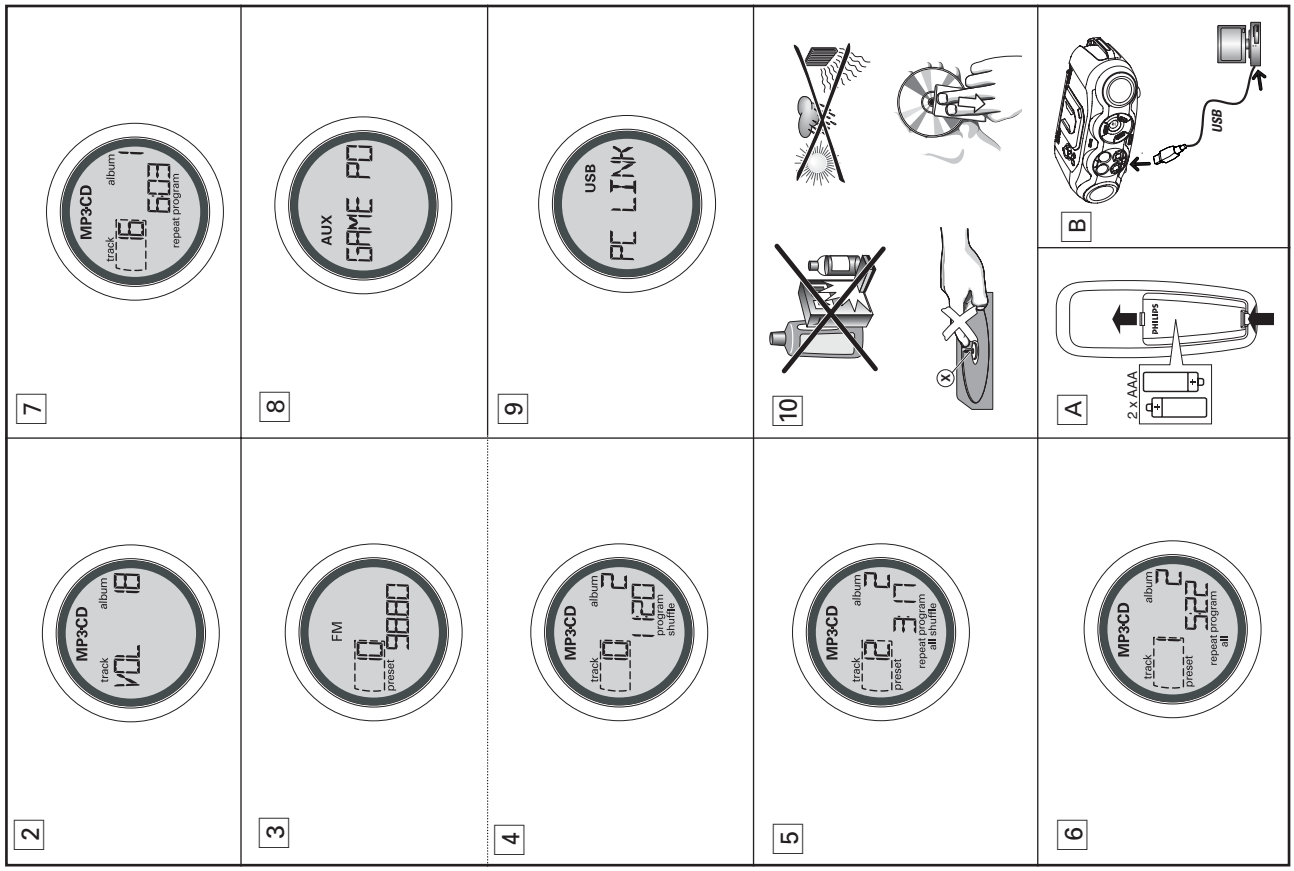
To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday´s cage.

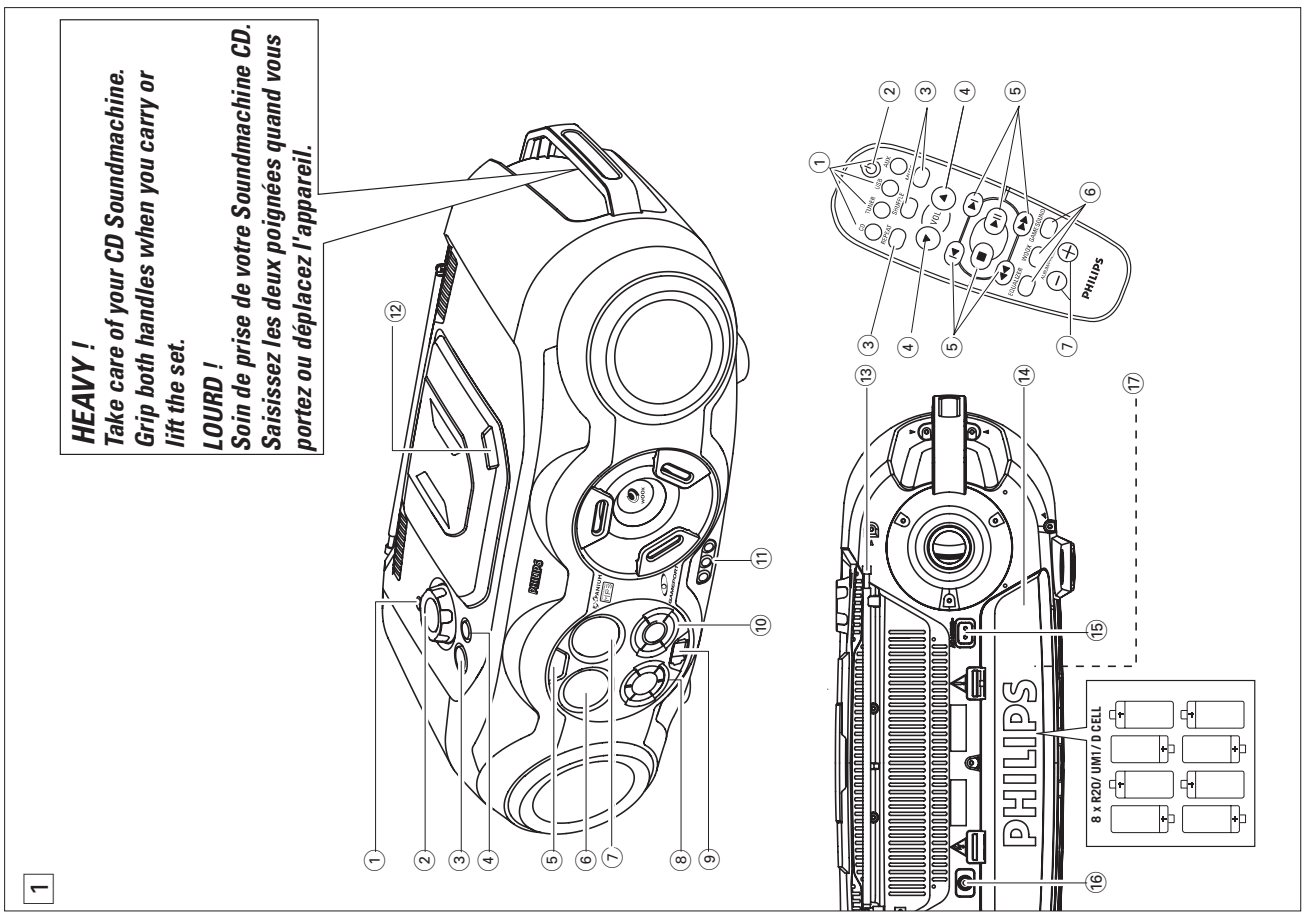
CD

Use Audio Signal Disc SBC429 4822 397 30184 (replaces test disc 3)
L.P.F. = 13 th order filter 4822 395 30204



CONNECTIONS AND CONTROLS




1
HEAVY !
Take care of your CD Soundmachine.
Grip both handles when you carry or lift the set.
LOURD !
Soin de prise de votre Soundmachine CD.
Saisissez les deux poignées quand vous portez ou déplacez l'appareil.
PHILIPS
8 x R20/ UM1/ D CELL

SUPPLIED ACCESSORIES

– remote control
– USB cable
– video cable
– CD-ROM USB PC LINK installers
– AC mains lead

TOP AND FRONT PANEL (See 1)

① 🎧 - 3.5 mm stereo headphone jack.
Note: The speakers will be muted when headphones are connected to the set.

② **VOLUME** -adjust volume level or equalizer level **(BASS/ MID /HIGH)**
③ **STANDBY ON** ⏻ - switch the set on/ off.
④ **SOURCE** - selects sound source for functions: **CD/ TUNER/ USB PC LINK/ GAME •AUX**
⑤ **IR SENSOR** -infrared sensor for remote control
⑥ **LCD Display** - shows the status of the set
⑦ **[dB]:** - display to indicate bass power.
⑧ **ALBUM /PRESET -, + :**
MP3 only :- select previous / next album.
TUNER :-select a previous / next preset station.
SEARCH ⏮ , ⏭
MP3-CD / CD :
- searches backward or forward ;
- skips to the beginning of a current track/ previous/ later track.
USB PC LINK -skips to the beginning of a previous/ later track.
TUNER **:** - tunes to radio stations
⏯- starts or pauses MP3-CD / CD / USB PC LINK playback
■ - stop MP3-CD / CD / USB PC LINK playback;
- erases a MP3-CD / CD program.
MODE :
- selects different MP3-CD play modes: e.g. **repeat** or **shuffle** order.
⑨ **USB** - connect the supplied USB cable here to the USB port of your computer
⑩ **GAMESOUND** - select sound effects: **BLAST/ PUNCH/ SPEED/ NORMAL** in **GAME •AUX** mode
WOOX - selects special bass enhancement on/ off
EQUALIZER -selects bass, mid and high frequencies.

PROG
MP3-CD / CD : -programs tracks and reviews the programmed songs;
TUNER **:** - programs radio stations.
BAND / DISPLAY
BAND : - selects waveband
DISPLAY: - display MP3-CD functions
⑪ **AUDIO IN (LEFT / RIGHT)** -LINE-IN jack for external audio appliance.
VIDEO IN - to keep video plug in place
⑫ **OPEN•CLOSE –** press to open/ close CD door

BACK PANEL (See 1)

⑬ **Telescopic antenna** - improved FM reception
⑭ **Battery compartment** - for 8 batteries, type R-20, UM-1 or D-cells
⑮ **AC MAINS** - inlet for power cord
⑯ **VIDEO OUT**- connect to the **VIDEO IN** jack on a TV or VCR for viewing or recording.
⑰ **Voltage selector** - adjust to match the local voltage 110/220V before plugging in the set

REMOTE CONTROL (See 1)

① **CD** - selects MP3-CD / CD sound source
TUNER - selects tuner source / wavebands
USB - selects **USB PC LINK**
AUX - selects **GAME •AUX**
② ⏻ -switches the set to standby / on if set operating on AC power. (Switches set off only if battery powered)
③ **REPEAT** -repeat all tracks in **USB PC LINK** source or selects the repeat modes in **CD** source
SHUFFLE -plays MP3-CD / CD tracks in random order in **CD / USB PC LINK** source
MUTE - interrupts/ resumes sound
④ **VOL ▼, ▲** -- adjust volume level or adjust equalizer level (**BASS/ MID /HIGH**)
⑤ ⏮ , ⏭ -select previous/ next track in MP3-CD / CD / USB PC LINK playback
■ - stop MP3-CD / CD / USB PC LINK playback;
- erases a MP3-CD / CD program.
⏯ - starts or pauses MP3-CD / CD / USB PC LINK playback
◀◀ / ▶▶ -searches backwards/ forwards within a MP3-CD / CD track.
TUNER **:** - tunes to radio stations

⑥ **EQUALIZER** -- selects bass, mid and high frequencies
WOOX -- select special bass enhancement on/ off
GAMESOUND - select sound effects: **BLAST/ PUNCH/ SPEED/ NORMAL** in game mode
⑦ **ALBUM /PRESET -, + :**
MP3 only :- select previous / next album.
TUNER :-select a previous / next preset station.

POWER SUPPLY

Whenever convenient, use the power supply to conserve battery life. Make sure you remove the power cord from the set and wall jack before inserting batteries.

Batteries (not included) (See 1)

- Insert 8 batteries, type **R-20**, **UM-1** or **D-cells**, (preferably alkaline) with the correct polarity.

Remote control (See A)

- Insert 2 batteries, type **AAA**, **R03** or **UM4** (preferably alkaline).

Incorrect use of batteries can cause electrolyte leakage and will corrode the compartment or cause the batteries to burst.

- *Do not mix battery types: e.g. alkaline with carbon zinc. Only use batteries of the same type for the set.*
- *When inserting new batteries, do not try to mix old batteries with the new ones.*
- ***Batteries contain chemical substances, so they should be disposed of properly.***

Using AC Power

1. Check if the AC power supply, as shown on the ***type plate located on the bottom of the set***, corresponds to your local power supply. If it does not, consult your dealer or service center.
2. If your set is equipped with a voltage selector, adjust the selector so that it matches with the local power supply.
3. Connect the power cord to the wall jack and the set is now ready for use.
4. To disconnect the power supply, unplug the set from the wall jack.

POWER-SAVING AUTOMATIC STANDBY

As a power-saving feature, the system automatically switches to standby 15 minutes after MP3-CD / CD has reached the end and no control is operated.

The type plate is located on the bottom of the set.

BASIC FUNCTIONS

Switching on and off and selecting function

1. Press **STANDBY ON** ⏻ on the set to switch on.
2. Press **SOURCE** once or more to select your desired function: **CD, TUNER, USB PC LINK** or **GAME•AUX** .
3. Press **STANDBY ON** ⏻ to switch off the set.

Note : *The tone, sound settings, tuner presets and the volume level (up to a maximum volume level of VOL 20) will be retained in the set's memory.*

Adjusting volume and sound (See 2)

1. Adjust the volume with the **VOLUME** control.
→ Display shows the volume level VOL and a number from 0-32.

2. wOOx

To enhance the bass response: press **wOOx** once or more to switch on / off.
→ **wOOx**-key backlight lights up when **wOOx** is turned on.

Notes:
- *wOOx can be used when you play TUNER, CD, USB PC LINK and GAME•AUX source.*
- *Some discs might be recorded in high modulation, which causes a distortion at high volume. If this occurs, deactivate **wOOx** or reduce the volume.*

3. EQUALIZER

To adjust the bass, mid and high frequencies press **EQUALIZER** once or more, then rotate **VOLUME** within 3 seconds to adjust each level.
→Display briefly shows BASS , MID , or HIGH level **(-5 to +5)** or VOL .

Note:
1. ***EQUALIZER*** *can be used during TUNER, CD, USB PC LINK and GAME•AUX source.*

IMPORTANT SPECIFICATIONS

Supported formats:

- Disc format ISO9660, Joliet and multi-session CDs. Use ISO9660 disc format when burning CD-ROMs.
- MP3 music fomats.
- MP3 bit rate (data rate): 32-320 Kbps and variable bit rate.
- 650Mb and 700Mb CD-R and CD-RWs.
- Directory nesting up to a maximum of 8 levels (max. 64 characters).

General information

The music compression technology MP3 (MPEG Audio Layer 3) reduces the original digital audio data by a factor up to 10 without losing significant sound quality. This allows you to record up to 10 hours of CD-like quality music on a single CD-ROM.

How to get MP3 music

Either download legal MP3 music from the internet or convert your audio CD into MP3 format with any MP3 encoder software, and then record onto a CD-R(W).

- To achieve a good sound quality a bit rate of at least 128kbps is recommended for MP3 files.
- Some encoder software offer an option to protect music files, i.e. the files can only be played on the computer which created them. If you burn such files on a CD-ROM, you cannot play them on this set. Make sure to deactivate the protection option in the encoder software before creating the music files. In this case you are responsible for adherence to all local or international copyrights.

When burning the MP3-CD

- To avoid problems with playback or missing files, make sure the file names are typed in English text characters and that the MP3 files end with **.mp3**
- Use a writing software capable of recording MP3 track titles (files) in numerical and alphabetical order. For details on using the software, refer to the operating instructions of the software.
- When recording on a CD-RW, make sure that you close (finalize) all sessions in order for the set to read and play your tracks.

MP3-CD / CD PLAYER

How to organize MP3 files

You can store up to a maximum number of 35 albums and 400 titles on one MP3-CD, depending on the song file sizes.

Albums and titles are alphabetically sorted.

- MP3-CD/ CD albums and titles are shown as numbers in the display.

IMPORTANT!

This set does not play/support the following:

- Empty albums: an empty album is an album that does not contain MP3 files, and will not be shown in the display.
- Non-supported file formats are skipped. This means that e.g.: Word documents **.doc** or MP3 files with extension **.dlf** are ignored and will not be played.
- **Playlist Files** e.g. .m3u, .pls of WMA, AAC, Winamp, Sonic, RealJukebox, MS Mediaplayer 7.0, MusicMatch.
- Recordings created on e.g. **PacketWriting** and **Package Writing**.

Playing MP3-CD & CD

This CD player plays Audio Discs including CD-R(W)s, and MP3 CD-ROMs.

- CD-I, CDV, VCD, DVD or computer CDs, are not possible.

1. Press **STANDBY ON** ⏻ once or more to on, then select **CD SOURCE**.

2. Press **OPEN•CLOSE** to open the CD door.
⇨ `CD OPEN` is displayed when the CD door is open.

3. Insert a CD with the printed side facing up and press down on **OPEN•CLOSE** to close the CD door.
⇨Display show `READ` ,when reading disc contents;
⇨Display : `INSERT DISC` if no disc inserted/ disc incorrectly inserted.,
⇨Display : `CHECK DISC` or `DISC ERROR` if disc damaged / dirty:.
– `CD` throughout CD operation;
– `MP3 CD` throughout MP3-CD operation;
– In CD stop mode: total track number and total playback time.

MP3-CD / CD PLAYER

– `NF DISC` is shown if you have inserted a non-finalized CD-R(W) / black disc.

Note: MP3-CDs may take more than 10 seconds to read.

4. Press ▶II to start playback.
→Display: Current track number and elapsed track time during MP3-CD / CD playback.
→If MP3-CD, the album number also is shown.

5. To pause playback press ▶II. Press ▶II again to resume play.
→ Time digits flashes during pause.

6. To stop MP3-CD / CD playback, press ■.

7. Press **STANDBY ON** ⏻ to switch off the set.

Note: MP3-CD / CD *play will also stop when:*
– *the CD door is opened*
– *the CD has reached the end*
– *you select other sound source.*

MP3-CD/ CD text display

During playback, press the **BAND / DISPLAY** button briefly and repeatedly to view text information:

MP3-CDs

Press **BAND / DISPLAY** once or more to view e.g.
– track name and elapsed track time;
– album name and elapsed track time;
– album number, track number and elapsed track time;
– ID3 tag details, if available. Otherwise, display shows `NO ID3 TAG` .

CDs

Press **BAND / DISPLAY** once or more to view e.g.
– Current track number and elapsed track time during CD playback;
– Remaining playback time of current track.

Selecting a different track

- Press **SEARCH** ⏮ or ⏭ (on the remote control |◀ or ▶|) once or repeatedly until the desired track number appears in the display.
- If you have selected a track number shortly after loading a disc or in the **PAUSE** position, you will need to press ▶II to start playback.

MP3-CD / CD PLAYER

MP3-CD mode only:
First press **ALBUM/ PRESET** – or + once or more to find your album.
⇨ Display: `NO ALBUM` if no albums are available.

Finding a passage within a track

1. Press and hold **SEARCH** ⏮ or ⏭.(on the remote control ◀◀ or ▶▶)
– The CD is played at high speed and low volume.
– No sound is heard during MP3-CD fast cue/ review.

2. When you recognize the passage you want, release ⏮ or ⏭. Normal playback continues.(on the remote control ◀◀ or ▶▶)

Note: *Searching is only possible within a track.*

Different play modes: SHUFFLE and REPEAT (See 4 - 7)

You can select and change the various play modes before or during playback. The play modes can also be combined with PROGRAM.

shuffle - tracks of the entire CD/ program are played in random order
shuffle repeat all - to repeat the entire CD/ program continuously in random order
repeat all - repeats the entire CD/ program
repeat - plays the current track continuously

1. To select play mode, press **MODE** once or more. (**SHUFFLE** / **REPEAT** on the remote control).

2. Press ▶II to start playback if in the stop position.
⇨If you have selected **shuffle**, playback starts automatically.

3. To select normal playback, press **MODE** repeatedly until the various modes are no longer displayed.
– You can also press the ■ to cancel your play mode in playing.

MP3-CD / CD PLAYER

Programming track numbers

Program in the stop position to select and store your CD tracks in the desired sequence. If you like, store any track more than once. Up to 20 tracks can be stored in the memory.

1. Press **SEARCH** ⏮ or ⏭ on the set to select your desired track number.(on the remote control ⏮ or ⏯)

MP3-CD mode only:

First press **ALBUM/ PRESET** – or + once or more to find your album, then press **SEARCH** ⏮ or ⏭. (on the remote control ⏮ or ⏯)

2. Press **PROG**.
   → Display: **program** and the selected track number PROG .appears briefly.
   → Display : SELECT TRACK if no track selected for programming.
3. Repeat steps **1-2** to select and store all desired tracks.
   → Display: FULL if you try to program more than 20 tracks.
4. To start playback of your disc program, press ⏯.

Note: *During normal playback, you can press* ***PROG*** *to add a current track to your program list.*

Reviewing the program

In stop position, press and hold down **PROG** for a while until the display shows all your stored track numbers in sequence.

→Display NO PROG if no tracks programmed.

Erasing a program

You can erase the program by:

- pressing ■ twice;
  → CLEAR displayed briefly, and **program** disappears.
- pressing **STANDBY ON** ⏻
- selecting another sound source
- opening the CD door.

GAMESOUND / USB PC LINK

GAMESOUND (See 8)

PLAYING WITH GAMESOUND:

1. Press **SOURCE** once or more on the set to select the **GAME•AUX** function (**AUX** on the remote control)
   →Display scrolls : GAME PORT
2. Connect your console to the cinches on the front of the set **AUDIO IN (LEFT / RIGHT)** and **VIDEO IN**.
3. Press **GAMESOUND** once or more to select your game sound option.
   →Display briefly shows BLAST , PUNCH , SPEED or NORMAL.

Connecting other equipment to your system

Use the supplied video cable to connect the **VIDEO OUT** terminal on the back of the set to **VIDEO IN** on a TV or VCR for viewing or recording.

USB PC LINK

Quick Setup Guide

PC system requirements

– USB port with Windows 98 SE / ME/ 2000/ XP
– Intel Pentium MMXX200 or higher
– CD-ROM drive

Installing MusicMatch software

1. Use the supplied USB cable to connect the set to the USB port on your computer. **(See B)**
2. Press **SOURCE** (**USB** on the remote control) once or more to select **USB PC LINK**.
3. Turn on your PC then insert the supplied USB PC LINK installer disc in the PC's CD-ROM drive. This application software can also be downloaded from **http://www.audio.philips.com**.

IMPORTANT!

Please use this customized MusicMatch software for your USB PC Link application. Remember to un-install all other MusicMatch jukebox software first from your PC system (if available).

DIGITAL TUNER

2. *To prevent sound interference the bass control options operate exclusively. You cannot combine the bass from* ***EQUALIZER*** *with* ***wOOx***

4. **GAMESOUND**

To adjust the game sound, press **GAMESOUND** once or more to select your option.

→Display briefly shows BLAST , PUNCH , SPEED or NORMAL.

Note: GAMESOUND *is only available when you play in* ***GAME•AUX*** *source.*

How to MUTE the sound

1. Press **MUTE** on the remote control to interrupt sound reproduction instantly.
   → Playback continues without sound and the display flashes MUTE .
2. To reactivate sound reproduction you can:
   – press **MUTE** again;
   – adjust the volume controls;
   – change to another source.

DIGITAL TUNER (See 3)

Tuning to stations

1. Press **STANDBY ON** ⏻ to on, then press **SOURCE** once or more to select **TUNER** (or press **TUNER** once on the remote control).
   → Display: shows TUNER briefly followed by waveband, frequency, and preset station number if already stored.
2. Press **BAND / DISPLAY** once or more to select your waveband (**TUNER** on the remote control)
3. **Tuning to stations**: you can tune to your stations manually or by automatic search tuning: Press down on ⏮ or ⏭ (◀◀ or ▶▶ on the remote control) and release button when the frequency in the display starts running.
   → The radio automatically tunes to a station of sufficient reception. Display shows SEARCH during automatic tuning.
4. Repeat step 3 if necessary until you find the desired station.

- To tune to a weak station, press ⏮ or ⏭ (◀◀ or ▶▶ on the remote control) briefly and repeatedly until you have found optimal reception.

To improve radio reception:

- For **FM**, extend, incline and turn the telescopic antenna. Reduce its length if the signal is too strong.
- For **MW**, the set uses a built-in antenna. Direct this antenna by turning the whole set.

Programming tuner stations:

You can store up to a total of 30 radio stations in the memory, manually or automatically (Autostore).

Autostore

Automatic programming will start from preset 1. The set will only program stations which are not in the memory already.

1. Press **ALBUM** / **PRESET-** or **+** once or more to select the preset number .
2. Press **PROG** for 4 seconds or more to activate auto store programming.
   → Display: AUTOSTORE is shown and available stations are programmed in order of waveband **FM**, followed by **MW** , preset 1 station will then be played after all stations are stored automatically.

Manual programming

1. Tune to your desired station (see **Tuning to stations**).
2. Press **PROG** to activate programming.
   → Display: **program** flashes.
3. Press **ALBUM** / **PRESET-** or **+** once or more to allocate a number from 1 to 30 to this station.
4. Press **PROG** again to confirm.
   → Display shows the preset number, waveband and the frequency of the preset station.
5. Repeat the above four steps to store other stations.

Note : *You can erase a preset station by storing another frequency in its place.*

To listen to a preset station

Press **ALBUM** / **PRESET-** or **+** once or more until the desired preset station is displayed.

USB PC LINK

4. The installation guide will appear automatically. If it does not, go to the CD-ROM drive in **Windows Explorer** and double click on the **USB PC LINK.exe**. Then perform the following steps:
   – Select your desired language from the list.
   – Select **installer driver**.
   – Select **installer MusicMatch jukebox**.
   – Select other options **(Tutorial, Free goodies, FAQ)**.

Note:
- You are advised to read the MusicMatch tutorial before using it for the first time. Make sure the volume on your PC is suitably adjusted to ensure sound output on the set. For optimum performance, the equalizer function in MusicMatch should be set to a low level.

5. Launch **MUSICMATCH JUKEBOX** and create your own playlist of favorite songs by dragging and dropping the music track from anywhere on your PC into the playlist window.

Note:
-- If you encounter any problem using the USB PC LINK, please refer to the FAQ (Frequently Asked Questions) stored in your USB PC LINK installer disc or visit ***www.audio.philips.com*** *for the latest FAQ updates .*

After setup, refer to "Connecting to USB PC Link" for details on the USB PC LINK operations.

Enable digital CD audio output
Before playing CDs on your PC's CD-ROM drive, it is necessary to configure your PC's hardware as follows:
For Windows ME/ 2000/ XP

1. Enter the system panel menu and select **'SYSTEM', 'PROPERTIES', 'HARDWARE', 'DEVICE MANAGER', 'CD-ROM DRIVES'** and **'PROPERTIES'.**

For Windows 98 SE

2. Check the **Enable digital CD audio for this CD-ROM device** setting option is selected (enabled).

   Note:-For windows 98 SE *you may need to refer to your PC's manual for correct configuration.*

USB PC LINK

Connecting to USB PC Link (See 9)
The USB PC LINK allows you to playback your music collection from the PC via the powerful amplifier and speakers of this set.

IMPORTANT!
Make sure the MusicMatch software has been installed. Refer to "Quick Setup Guide" for the USB PC Link.

1. Turn on your set and computer .
   ⇨ Check your PC volume is suitably adjusted and not set to minimum / mute.
2. Press **SOURCE** (**USB** on the remote control) once or more to select **USB PC LINK** .
3. If correctly connected your PC will automatically launch **MUSICMATCH JUKEBOX.**
   ⇨ If the audio streaming is detected, the current track name scrolls .
   ⇨ If NO CONNECTION scrolls for a while, check the connection between your PC and set.
4. Press ⏮ or ⏭ until the desired track in the playlist is highlighted.
5. Press ▶II to start playback.
   ⇨ The track time appears and the track name scrolls once.

Note: The display only supports English characters in uppercase.

6. If you want to see the track details displayed press **MODE.**
   During playback,
   – Press **SHUFFLE** on the remote control to play all available tracks in the playlist in random order.
   – Press **REPEAT** on the remote control to repeat playback all the tracks in the playlist.
7. To cancel play modes/ stop playback, press ■ or select another sound sources.

MAINTENANCE & SAFETY

MAINTENANCE & SAFETY (See 10)

CD player and disc handling

- If the CD player cannot read CDs correctly, use a cleaning CD to clean the lens before taking the set to repair.
- The lens of the CD player should *never be touched!*
- Sudden changes in the surrounding temperature can cause condensation on the lens of your CD player. Playing a CD is then not possible. Do not attempt to clean the lens but leave the set in a warm environment until the moisture evaporates.
- Always close the CD door to avoid dust on the lens.
- To take a CD out of its box, press the center spindle while lifting the CD.
- To clean the CD, wipe in a straight line from the center towards the edge using a soft, lint-free cloth. Do not use cleaning agents as they may damage the disc.
- *Never* write on a CD or attach any stickers to it.

MAINTENANCE & SAFETY

Safety Information

- Don't expose the set, batteries, CDs to humidity, rain, sand or excessive heat.
- Clean the set with a dry cloth. Don't use any cleaning agents containing alcohol, ammonia, benzene or abrasives as these may harm the set.
- Place the set on a hard and flat surface so that the system does not tilt. Make sure there is good ventilation to prevent the set from overheating.

For more information on operation instruction please visit Philips Audio internet site : http://www.audio.philips.com

TROUBLESHOOTING

If a fault occurs, first check the points listed below before taking the set for repair. If you are unable to remedy a problem by following these hints, consult your dealer or service center.

WARNING: ***Do not open the set as there is a risk of electric shock! Under no circumstances should you try to repair the set yourself, as this will invalidate the warranty.***

No sound /power

– *Volume not adjusted*
• Adjust the VOLUME

– *Mains lead not securely connected*
• Connect the AC mains lead properly

– *Batteries flat / incorrectly inserted*
• Insert (fresh) batteries correctly

– *Headphones connected to the set*
• Disconnect headphones

– *Electrostatic discharge/interference*
• Unplug the set. If batteries inserted, remove batteries from the battery compartment. Press and hold **STANDBY ON** ⏻ for 10 seconds, then re-plug / replace battery supply, and try activating the set again.
• When in USB PC LINK mode, check that your PC's volume is audible and not set to minimum.
• When playing a CD from the PC's CD-ROM drive, refer to **USB PC Link - Enable digital CD audio output**.

– *CD contains non-audio files*
• Press **SEARCH** or ⏭ once or more to skip to a CD audio track, instead of the data file

Poor sound quality in GAME•AUX mode

• Adjust the volume on the set or on your game console

Severe radio hum or noise

– *Electrical interference: set too close to TV, VCR or computer*
• Move the set to increase the distance

Remote control does not function properly

– *Batteries flat/ incorrectly inserted*
• Insert (fresh) batteries correctly

– *Distance/ angle between the set too large*
• Reduce the distance/ angle

Poor radio reception

– *Weak radio signal*
• FM / MW: Adjust the FM / MW telescopic aerial

NF DISC **indication**

– *CD-R(W) is blank/ not finalized*
• Use an unfinalized CD-R(W)

INSERT DISC/CHECK DISC/DISC ERROR **indication**

– *No CD inserted*
• Insert a suitable disc

– *CD badly scratched or dirty*
• Replace/ clean CD, see Maintenance

– *Laser lens steamed up*
• Wait until lens has cleared

The CD skips tracks

– *CD damaged or dirty*
• Replace or clean CD

– *shuffle or program is active*
• Switch off shuffle / program

NO CONNECTION **is displayed in USB PC LINK mode for more than 10 sconds**

– *Check the connection between your PC and the set. If necessary, please refer to the chapter* ***Connecting to USB PC Link*** *for the initial setup required.*
• Make sure the connected PC is turned on and the MusicMatch software is working.

Sound skips during MP3 playback

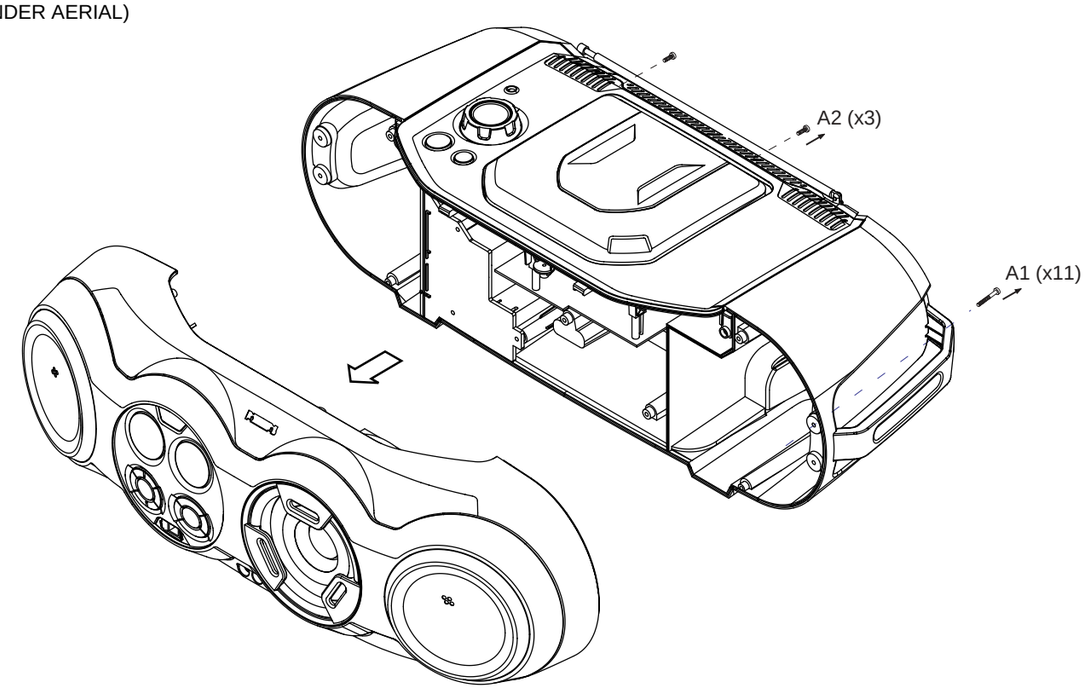
– *MP3 file made at compression level exceeding 320kbps*
• Use a lower compression level to record CD tracks into MP3 format

– *Disc damaged or dirty*
• Replace or clean disc

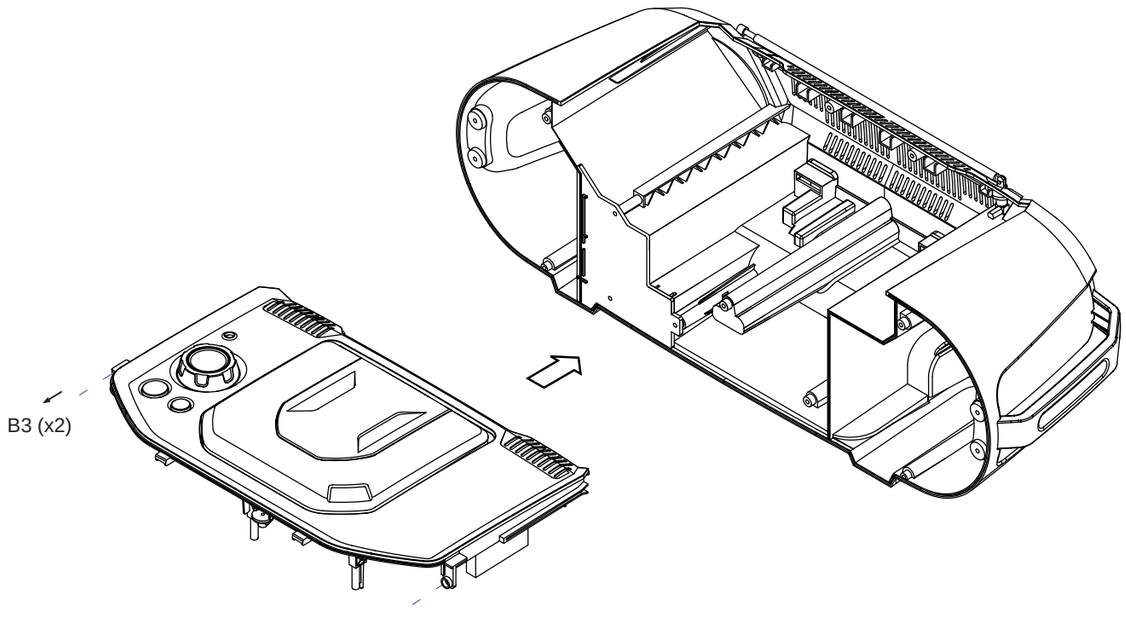
Cannot find desired MP3 title

– *Wrong file extension used and/ or file name with unsuitable text characters used*
• Make sure the file names are typed in English text characters an that the MP3 files end with .mp3

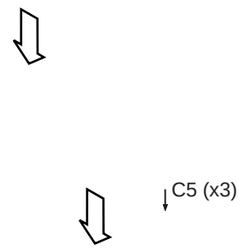
A. REMOVE FRONT CABINET ASSEMBLY
- REMOVE SCREWS A1 (3X16) 11 PCS.
- REMOVE SCREW A2 (3X10) 3 PCS
(UNDER AERIAL)

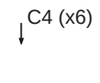


B. REMOVE BOTTOM CABINET ASSEMBLY
- REMOVE SCREWS B3 (3X10) 2 PCS.

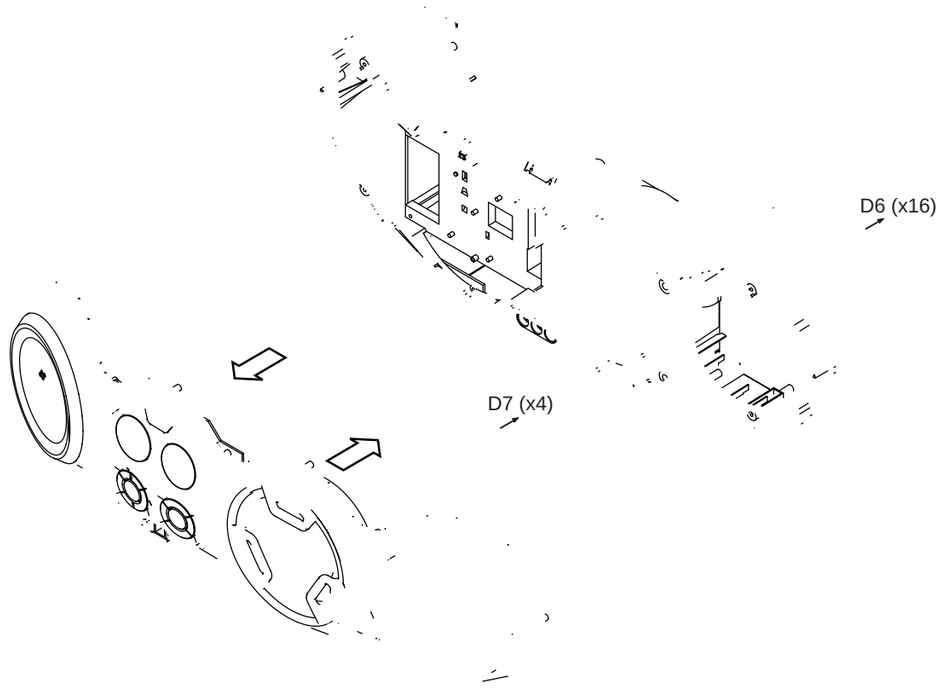


C. REMOVE DECK MECHANISM
- REMOVE SCREWS C4 (3X10) 6 PCS.
- REMOVE POWER BOARD
- REMOVE SCREWS C5 (3X10) 3 PCS.
- REVOVE CD BOARD





D. REMOVE KEY BOARD
- REMOVE SCREWS D6 (2.5X10) 16 PCS.
- REMOVE FRONT PANEL ASSEMBLY
- REMOVE SCREWS D7 (2.5X10) 4 PCS.



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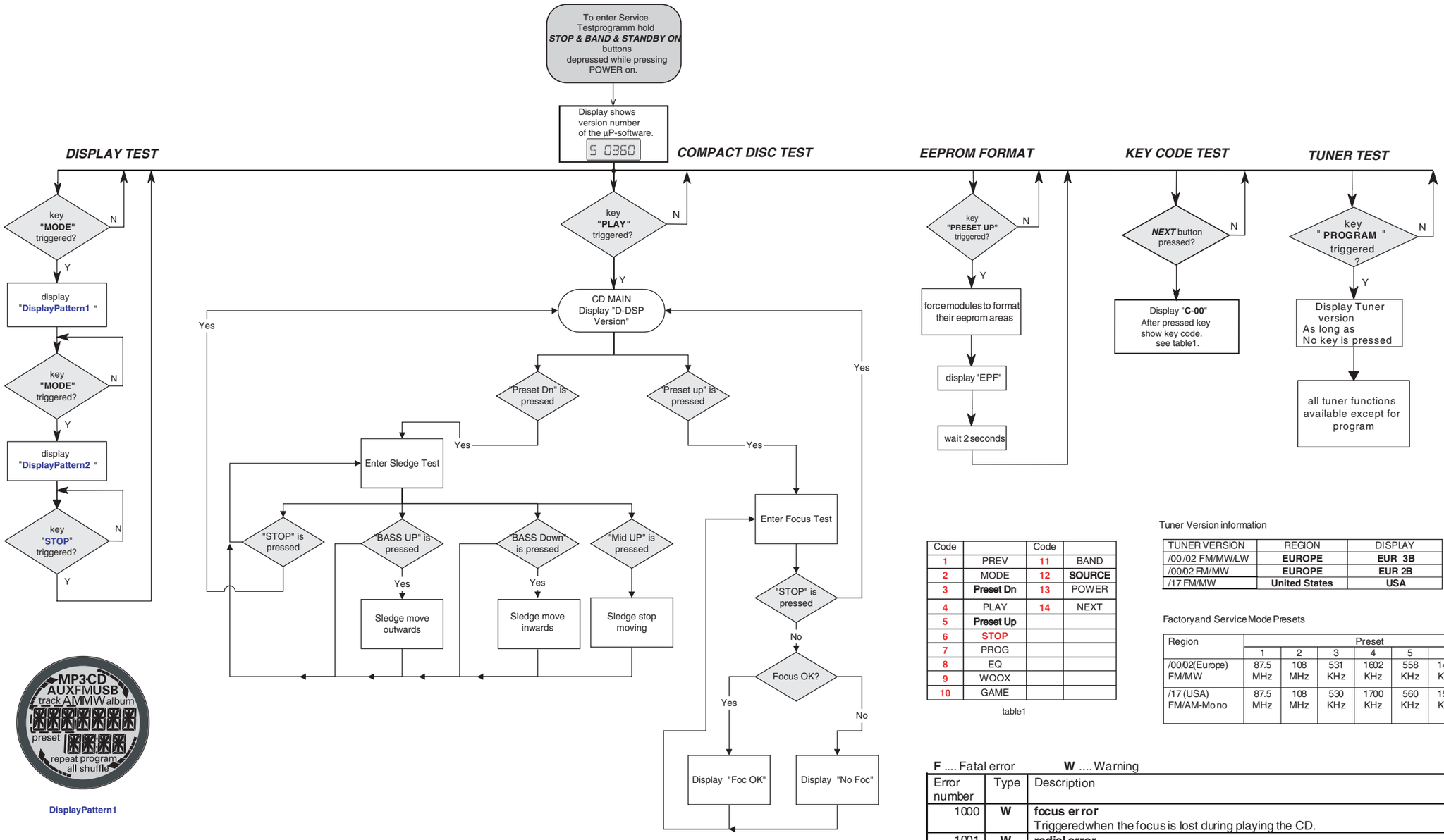
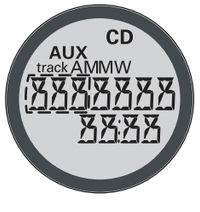
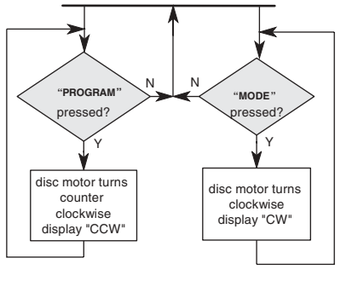
SERVICE TEST PROGRAM

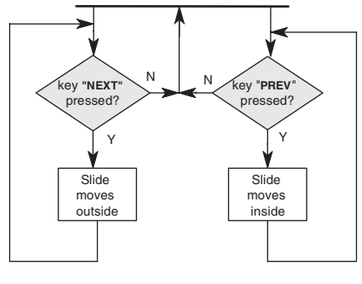

To enter Service Testprogramm hold STOP & BAND & STANDBY ON buttons depressed while pressing POWER on.
Display shows version number of the µP-software.
S 0360
DISPLAY TEST
COMPACT DISC TEST
EEPROM FORMAT
KEY CODE TEST
TUNER TEST
key "MODE" triggered?
display "DisplayPattern1 "
key "MODE" triggered?
display "DisplayPattern2 "
key "STOP" triggered?
key "PLAY" triggered?
CD MAIN Display "D-DSP Version"
"Preset Dn" is pressed
"Preset up" is pressed
Enter Sledge Test
"STOP" is pressed
"BASS UP" is pressed
"BASS Down" is pressed
"Mid UP" is pressed
Sledge move outwards
Sledge move inwards
Sledge stop moving
Enter Focus Test
"STOP" is pressed
Focus OK?
Display "Foc OK"
Display "No Foc"
key "PRESET UP" triggered?
force modules to format their eeprom areas
display "EPF"
wait 2 seconds
NEXT button pressed?
Display "C-00" After pressed key show key code. see table1.
key " PROGRAM " triggered ?
Display Tuner version As long as No key is pressed
all tuner functions available except for program
Yes
No

DisplayPattern1



DisplayPattern2


DISC MOTOR TEST
"PROGRAM" pressed?
"MODE" pressed?
disc motor turns counter clockwise display "CCW"
disc motor turns clockwise display "CW"



Code		Code	
1	PREV	11	BAND
2	MODE	12	**SOURCE**
3	**Preset Dn**	13	POWER
4	PLAY	14	NEXT
5	**Preset Up**		
6	**STOP**		
7	PROG		
8	EQ		
9	WOOX		
10	GAME		

table1

Tuner Version information

TUNER VERSION	REGION	DISPLAY
/00 /02 FM/MW/LW	**EUROPE**	**EUR 3B**
/00/02 FM/MW	**EUROPE**	**EUR 2B**
/17 FM/MW	**United States**	**USA**

Factory and Service Mode Presets

Region	Preset						
	1	2	3	4	5	6	7
/00/02(Europe) FM/MW	87.5 MHz	108 MHz	531 KHz	1602 KHz	558 KHz	1494 KHz	-
/17 (USA) FM/AM-Mono	87.5 MHz	108 MHz	530 KHz	1700 KHz	560 KHz	1500 KHz	-

F .... Fatal error **W** .... Warning

Error number	Type	Description
1000	**W**	**focus error** Triggered when the focus is lost during playing the CD.
1001	**W**	**radial error** Triggered when the radial servo is not on track for a certain time during playing the CD.
1002	**W**	**sledge in error** The sledge did not reach its inner position (inner switch is closed) before approximately 6 seconds have passed by inner switch or sledge motor problem.
1003	**W**	**sledge out error** The sledge did not come out of its inner position (inner switch is open) before approximately 300ms have passed by - inner switch or sledge motor problem.
1005	**W**	**jump error** Triggered when the jump destination could not be found within **a certain time**.
1006	**W**	**subcode error** No valid subcode for **a certain time** during play.
1007	**W**	**PLL error** The Phase-Lock-Loop could not lock within **a certain time**.
1008	**W**	**turntable motor error** Generated when the CD could not reach 75 % of speed during start-up within a certain time. Disc motor problem
1020	**F**	**focus search error** The focus point has not been found within a certain time.

table2

Abbreviations and Pin-description of CD ICs

SERVO PROCESSOR SAA7325H

SYMBOL	PIN	DESCRIPTION
HFREF	1	comparator common mode input
HFIN	2	comparator signal input
ISLICE	3	current feedback output from data slicer
V_{SSA1}	4(1)	analog ground 1
V_{DDA1}	5(1)	analog supply voltage 1
I_{ref}	6	reference current output pin
V_{RIN}	7	reference voltage for servo ADC's
D1	8	unipolar current input (central diode signal input)
D2	9	unipolar current input (central diode signal input)
D3	10	unipolar current input (central diode signal input)
D4	11	unipolar current input (central diode signal input)
R1	12	unipolar current input (satellite diode signal input)
R2	13	unipolar current input (satellite diode signal input)
V_{SSA2}	14(1)	analog ground 2
CROUT	15	crystal/resonator output
CRIN	16	crystal/resonator input
V_{DDA2}	17(1)	analog supply voltage 2
LN	18	DAC left channel differential output - negative
LP	19	DAC left channel differential output - positive
V_{neg}	20	DAC negative reference input
V_{pos}	21	DAC positive reference input
RN	22	DAC right channel differential output - negative
RP	23	DAC right channel differential output - positive
SELPLL	24	selects whether internal clock multiplier PLL is used
TEST1	25	test control input 1; this pin should be tied LOW
CL16	26	16.9344 MHz system clock output
DATA	27	serial d4(1)ata output (3-state)
WCLK	28	word clock output (3-state)
SCLK	29	serial bit clock output (3-state)
EF	30	C2 error flag output (3-state)
TEST2	31	test control input 2; this pin should be tied LOW
KILL	32	kill output (programmable; open-drain)
V_{SSD1}	33(1)	digital ground 2
V2/V3	34	versatile I/O: input versatile pin 2 or output versatile pin 3 (open-drain)
WCLI	35	word clock iutput (for data loopback to DAC)
SDI	36	serial data input (for data loopback to DAC)
SCLI	37	serial bit clock input (for data loopback to DAC)
RESET	38	power-on reset input (active LOW)
SDA	39	microcontroller interface data I/O line (open-drain output)
SCL	40	microcontroller interface clock line input

4 - 3

Abbreviations and Pin-description of CD ICs

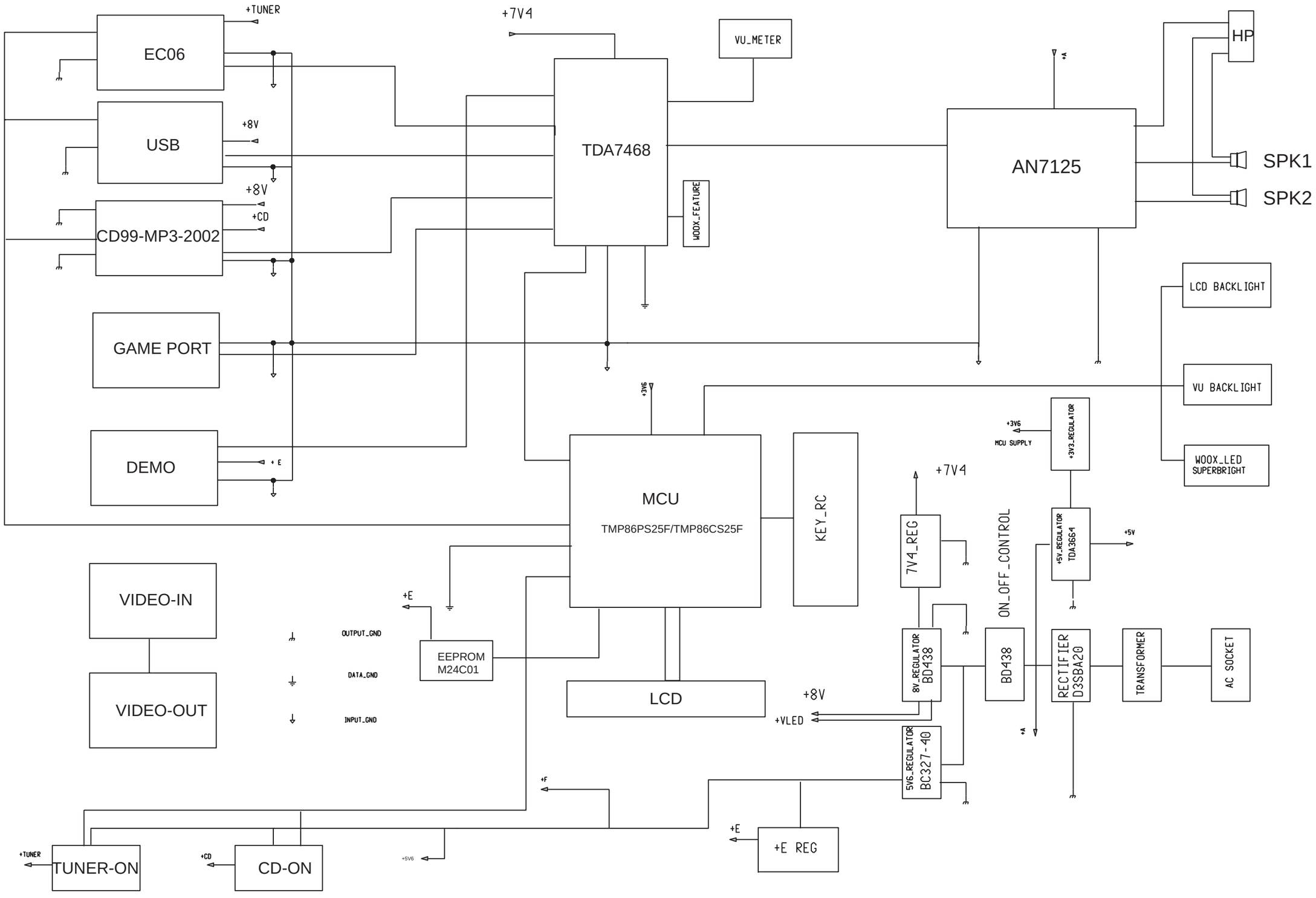
SERVO PROCESSOR SAA7325H

SYMBOL	PIN	DESCRIPTION
RAB	41	microcontroller interface R/W and load control line input (4-wire bus mode)
SILD	42	microcontroller interface R/W and load control line input (4-wire bus mode)
STATUS	43	servo interrupt request line/decoder status register output (open-drain)
TEST3	44	test control input 3; this pin should be tied LOW
RCK	45	subcode clock input
SUB	46	P-to-W subcode bits output (3-state)
SFSY	47	subcode frame sync output (3-state)
SBSY	48	subcode block sync output (3-state)
CL11/4	49	11.2896 MHz or 4.2336 MHz (for microcontroller) clock output
V_{SSD2}	50(1)	digital ground 3
DOBM	51	bi-phase mark output (externally buffered; 3-state)
$V_{DDD1(P)}$	52(1)	digital supply voltage 2 for periphery
CFLG	53	correction flag output (open-drain)
RA	54	radial actuator output
FO	55	focus actuator output
SL	56	sledge control output
$V_{DDD2(C)}$	57(1)	digital supply voltage 3 for core
V_{SSD3}	58(1)	digital ground 4
MOTO1	59	motor output 1; versatile (3-state)
MOTO2	60	motor output 2; versatile (3-state)
V4	61	versatile output pin 4
V5	62	versatile output pin 5
V1	63	versatile intput pin 1
LDON	64	laser drive on output (open-drain)

Note : All supply pins must be connected to the same external power supply voltage.

5 - 1

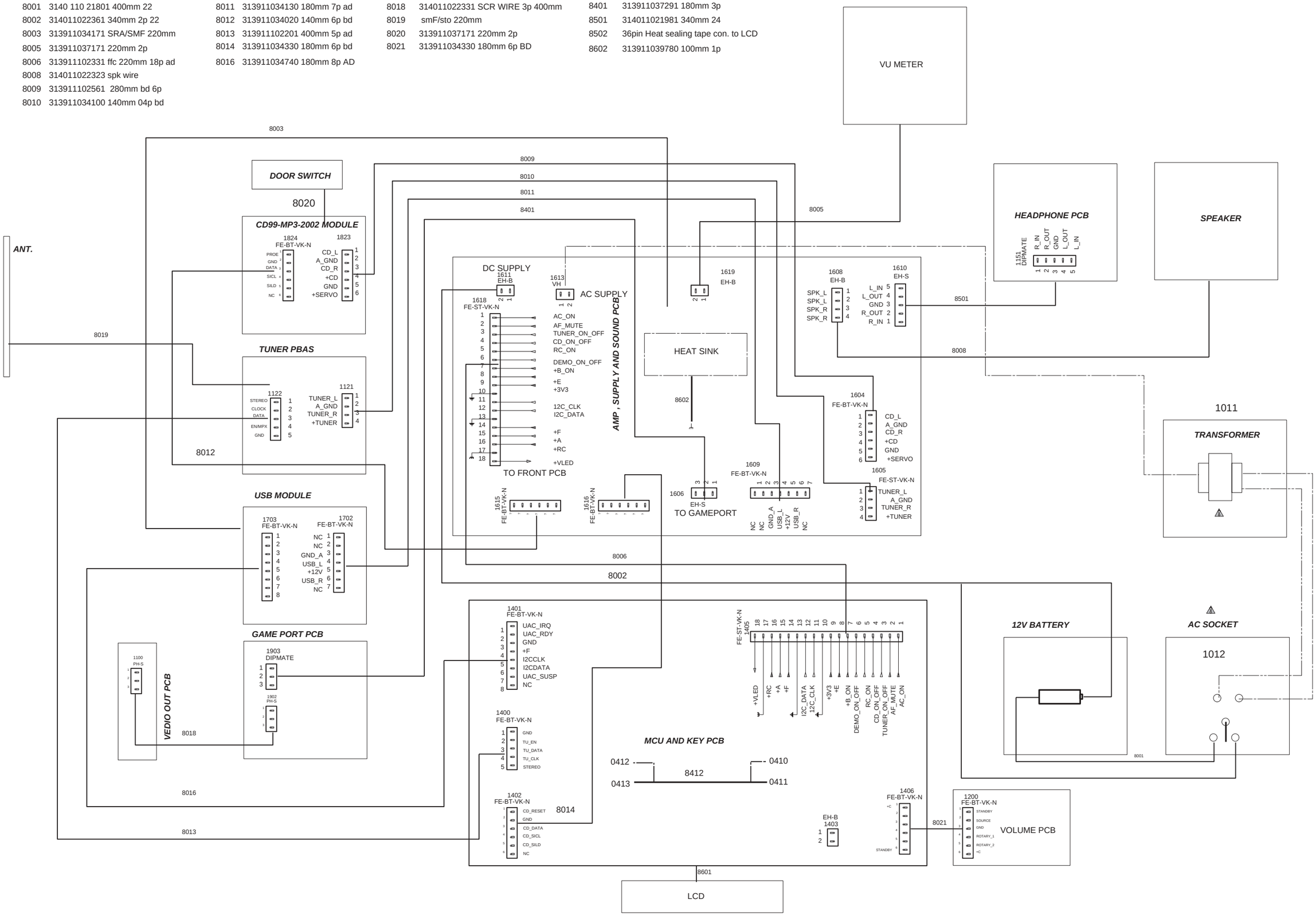
BLOCK DIAGRAM



5 - 2

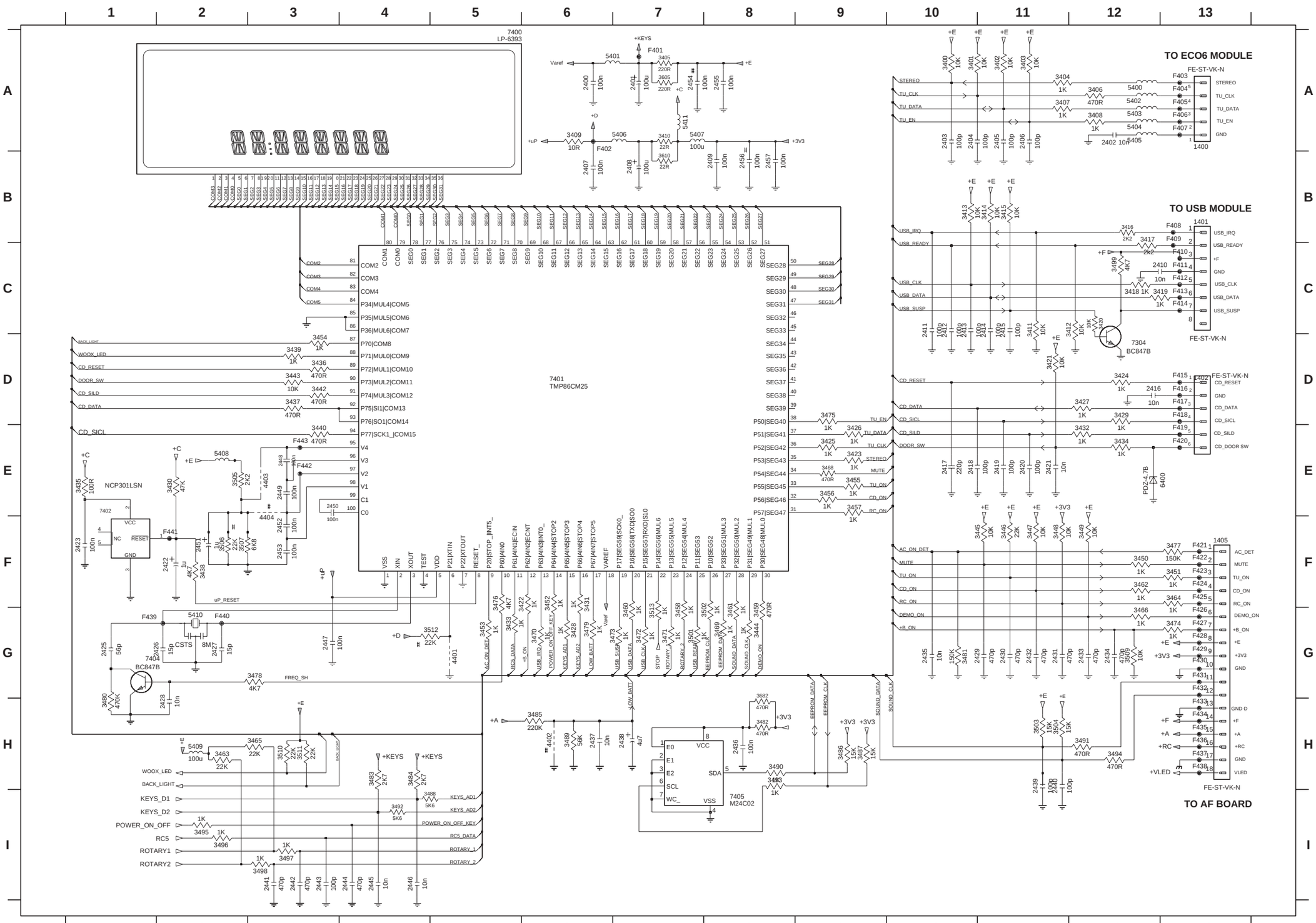
WIRING DIAGRAM

8001 3140 110 21801 400mm 22
8002 314011022361 340mm 2p 22
8003 313911034171 SRA/SMF 220mm
8005 313911037171 220mm 2p
8006 313911102331 ffc 220mm 18p ad
8008 314011022323 spk wire
8009 313911102561 280mm bd 6p
8010 313911034100 140mm 04p bd
8011 313911034130 180mm 7p ad
8012 313911034020 140mm 6p bd
8013 313911102201 400mm 5p ad
8014 313911034330 180mm 6p bd
8016 313911034740 180mm 8p AD
8018 314011022331 SCR WIRE 3p 400mm
8019 smF/sto 220mm
8020 313911037171 220mm 2p
8021 313911034330 180mm 6p BD
8401 313911037291 180mm 3p
8501 314011021981 340mm 24
8502 36pin Heat sealing tape con. to LCD
8602 313911039780 100mm 1p



6 - 1

KEY BOARD - CIRCUIT DIAGRAM



1400 A13
1401 B13
1402 D13
1405 F13
2400 A6
2401 A7
2402 A12
2403 A10
2404 A10
2405 A11
2406 A11
2407 B6
2408 B7
2409 B8
2410 C12
2411 C10
2412 C10
2413 C10
2414 C11
2415 C11
2416 D12
2417 E10
2418 E10
2419 E11
2420 E11
2421 E11
2422 F2
2423 F1
2425 G1
2426 G2
2427 G2
2428 H2
2429 G11
2430 G11
2431 G11
2432 G11
2433 G12
2434 G12
2435 G10
2436 H8
2437 H6
2438 H7
2439 H11
2440 H11
2441 I3
2442 I3
2443 I3
2444 I4
2445 I4
2446 I4
2447 G3
2448 E3
2449 E3
2450 E3
2451 F2
2452 F3
2453 F3
2454 A7
2455 A8
2456 B8
2457 B8
3400 A10
3401 A10
3402 A11
3403 A11
3404 A11
3405 A7
3406 A12
3407 A11
3408 A12
3409 A6
3410 A7
3411 C11
3412 C12
3413 B10
3414 B11
3415 B11
3416 B12
3417 B12
3418 C12
3419 C13
3420 C12
3421 D11
3422 F6
3423 E9
3424 D12
3425 E9
3426 E9
3427 D12
3428 G6
3429 D12
3430 E2
3431 F6
3432 E12
3433 G5
3434 E12
3435 E1
3436 D3
3437 D3
3438 F2
3439 D3
3440 E3
3442 D3
3443 D3
3444 G8
3445 F11
3446 F11
3447 F11
3448 F11
3449 F12
3450 F12
3451 F13
3452 F6
3453 G5
3454 D3
3455 E9
3456 E9
3457 E9
3458 G7
3459 G8
3460 G7
3461 G8
3462 F12
3463 H2
3464 F13
3465 H3
3466 G12
3468 E9
3469 G8
3470 G6
3471 G7
3472 G7
3473 G7
3474 G13
3475 F5
3476 F5
3477 F13
3478 G3
3479 G6
3480 H1
3481 G10
3482 H8
3483 H4
3484 H4
3485 H6
3486 H9
3487 H9
3488 I4
3489 H6
3490 H8
3491 H12
3492 I4
3493 H8
3494 H12
3495 I2
3496 I2
3497 I3
3498 I3
3499 C12
3501 G7
3502 G8
3503 H11
3504 H11
3505 E2
3506 F2
3507 F2
3509 G12
3510 H3
3511 H3
3512 G5
3513 G7
3605 A7
3610 B7
3682 G8
4401 G5
4402 H6
4403 E3
4404 E3
5400 A12
5401 A6
5402 A12
5403 A12
5404 A12
5405 A12
5406 A7
5407 A7
5409 H2
5410 G2
5411 A7
6400 E12
7304 D12
7400 A6
7401 D6
7402 E1
7404 G2
7405 I8
F401 A6
F402 A6
F403 A13
F404 A13
F405 A13
F406 A13
F407 A13
F408 B13
F409 B13
F410 C13
F411 C13
F412 C13
F413 C13
F414 C13
F415 D13
F416 D13
F417 D13
F418 D13
F419 E13
F420 E13
F421 F13
F422 F13
F423 F13
F424 F13
F425 F13
F426 G13
F427 G13
F428 G13
F429 G13
F430 G13
F431 G13
F432 G13
F433 H13
F434 H13
F435 H13
F436 H13
F437 H13
F438 H13
F439 G1
F440 G2
F441 F2
F442 E3
F443 E3

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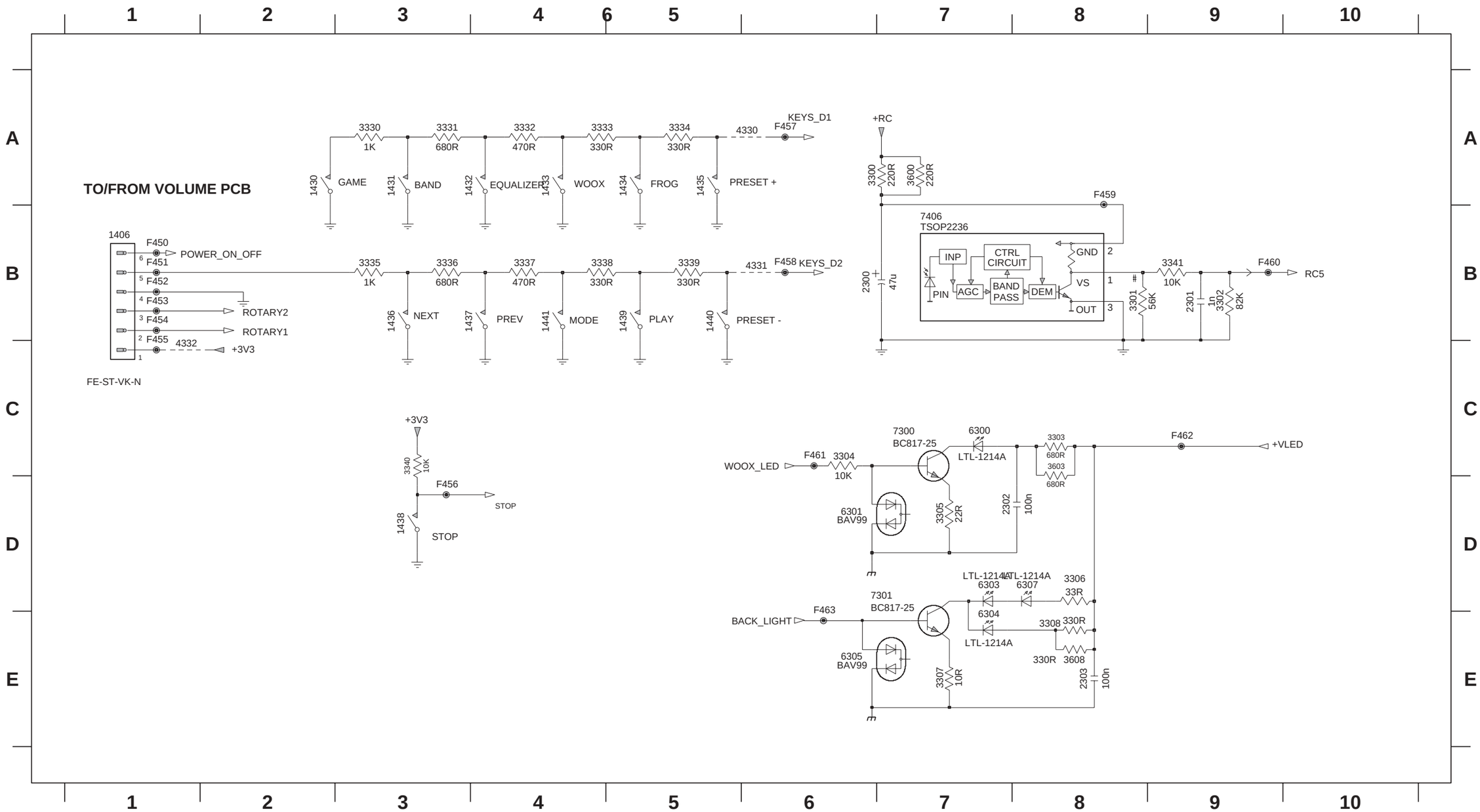
KEY BOARD - CIRCUIT DIAGRAM

1406 B1 1432 A4 1435 A5 1438 D3 1441 B4 2302 D7 3301 B8 3304 C6 3307 E7 3331 A3 3334 A5 3337 B4 3340 C3 3603 C8 4331 B6 6301 D6 6305 E6 7301 D6 F451 B1 F454 B1 F457 A6 F460 B9 F463 E6
1430 A2 1433 A4 1436 B3 1439 B5 2300 B6 2303 E8 3302 B9 3305 D7 3308 E8 3332 A4 3335 B3 3338 B4 3341 B9 3608 E8 4332 C1 6303 D7 6307 D8 7406 B7 F452 B1 F455 C1 F458 B6 F461 C6
1431 A3 1434 A5 1437 B4 1440 B5 2301 B9 3300 A6 3303 C8 3306 D8 3330 A3 3333 A4 3336 B3 3339 B5 3600 A7 4330 A6 6300 C7 6304 E7 7300 C7 7406 B1 F450 B1 F453 B1 F456 D3 F459 A8 F462 C9



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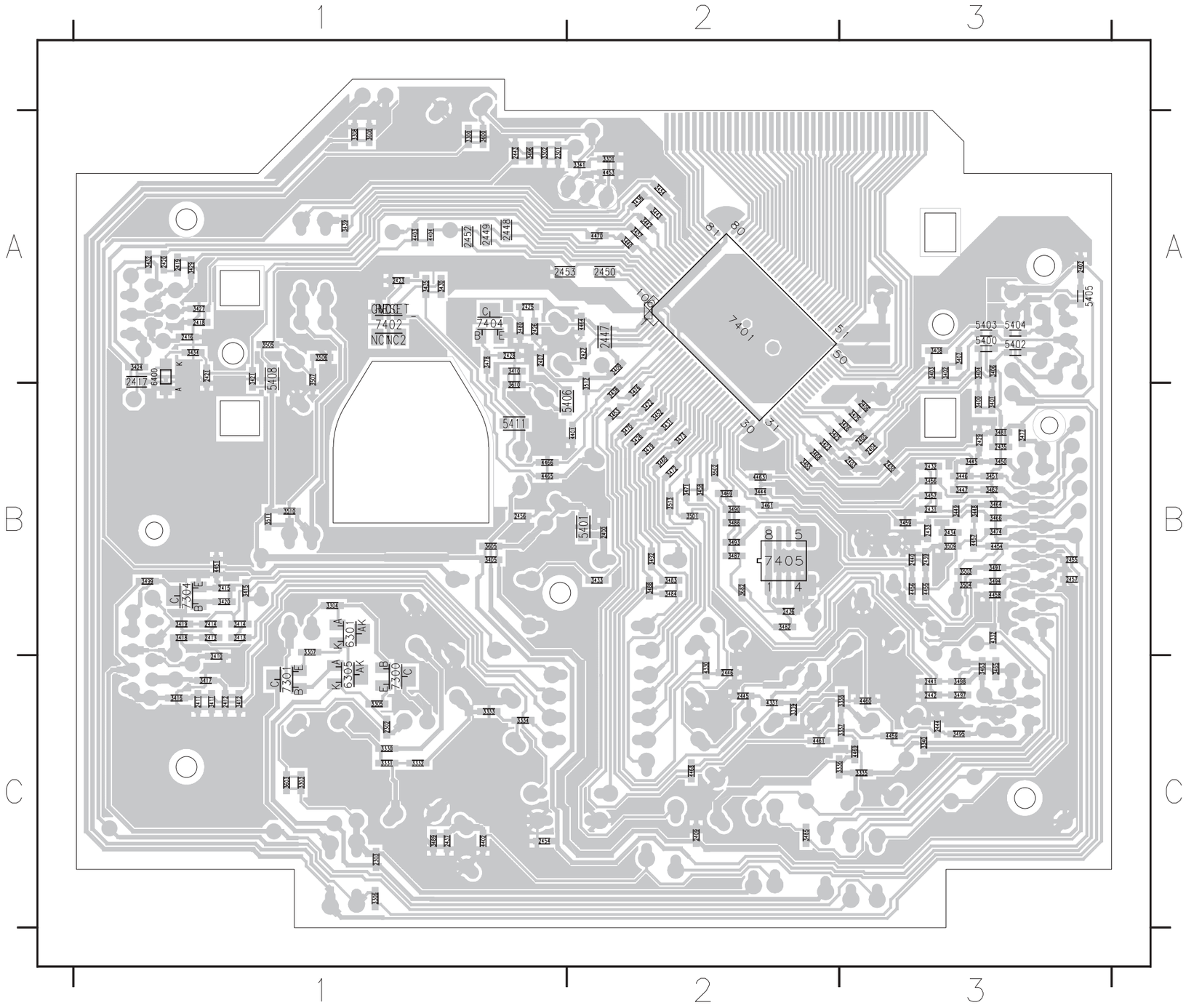
KEY BOARD - LAYOUT DIAGRAM
(COPPER SIDE VIEW)



2301	A1	3334	C1	3461	B2	4457	B3	F443	A1
2302	C1	3335	C3	3462	B3	4458	B3	F450	C3
2303	C1	3336	C2	3463	C3	4459	C3	F451	C3
2400	B2	3337	C3	3464	B3	4460	C3	F452	C3
2402	A3	3338	C3	3465	C3	4461	C2	F453	C3
2403	B3	3339	C2	3466	B3	44631	B2	F454	C3
2404	B3	3340	C3	3468	B2	4464	A2	F455	B3
2405	B3	3341	A2	3469	B2	4465	B1	F456	C2
2406	B3	3400	B3	3470	B2	4466	B1	F457	B2
2407	A1	3401	B3	3471	B2	4468	C2	F458	C2
2409	C2	3402	A3	3472	B2	4469	C3	F459	A2
2410	C1	3403	A3	3473	B2	4470	A2	F460	A2
2411	C1	3404	A3	3474	B3	5400	A3	F461	A1
2412	C1	3405	B1	3475	B3	5401	B2	F462	C1
2413	B1	3406	A3	3476	B2	5402	A3	F463	A1
2414	B1	3407	A3	3477	B3	5403	A3		
2415	B1	3408	A3	3478	A1	5404	A3		
2416	A1	3409	A2	3479	B2	5405	A3		
2417	A1	3410	A1	3480	A1	5406	B1		
2418	A1	3411	C1	3481	B3	5408	A1		
2419	A1	3412	C1	3482	B2	5411	B1		
2420	A1	3413	B1	3483	B2	6301	B1		
2421	A1	3414	B1	3484	B2	6305	C1		
2423	A1	3415	B1	3485	C2	6400	A1		
2425	A1	3416	C1	3486	B2	7300	C1		
2426	A1	3417	C1	3487	B2	7301	C1		
2427	A2	3418	B1	3488	B2	7304	B1		
2428	A1	3419	B1	3489	C1	7401	A2		
2429	B3	3420	B1	3490	B2	7402	A1		
2430	B3	3421	A1	3491	B3	7404	A1		
2431	B3	3422	B2	3492	B2	7405	B2		
2432	B3	3423	B2	3493	B2	F401	B1		
2433	B3	3424	A1	3494	B3	F402	A2		
2434	B3	3425	B2	3495	C3	F403	A3		
2435	B3	3426	B3	3496	A1	F404	A3		
2436	B2	3427	A1	3497	C3	F405	A3		
2437	C1	3428	B2	3498	C3	F406	A3		
2439	B3	3429	A1	3499	B1	F407	A3		
2440	B3	3430	A1	3501	B2	F408	C1		
2441	C3	3431	B2	3502	B2	F409	C1		
2442	C3	3432	A1	3503	B3	F410	C1		
2443	A1	3433	B2	3504	B3	F411	C1		
2444	C3	3434	A1	3505	A1	F412	B1		
2445	C2	3435	A1	3506	A1	F413	B1		
2446	C2	3436	A2	3507	A1	F414	B1		
2447	A2	3437	A2	3509	B3	F415	A1		
2448	A1	3438	B2	3510	B1	F416	A1		
2449	A1	3439	A1	3511	B1	F417	A1		
2450	A2	3440	A2	3512	B2	F418	A1		
2452	A1	3442	A2	3513	B2	F419	A1		
2453	A1	3443	A2	3600	A1	F420	B1		
2454	C1	3444	B2	3603	C1	F421	B3		
2455	B3	3445	B3	3605	B1	F422	B3		
2456	B1	3446	B3	3608	A1	F423	B3		
2457	B3	3447	B3	3610	B1	F424	B3		
3300	A1	3448	B3	3682	B2	F425	B3		
3301	A2	3449	B3	4330	C2	F426	B3		
3302	A1	3450	B3	4331	C2	F427	B3		
3303	C1	3451	B3	4332	B3	F428	B3		
3304	B1	3452	B2	4401	B2	F429	B3		
3305	C1	3453	B2	4402	C1	F430	C3		
3306	C1	3454	A2	4403	A1	F433	B3		
3307	B1	3455	B2	4404	A1	F434	C3		
3308	A1	3456	B3	4451	B1	F435	C3		
3330	C1	3457	B3	4453	A2	F436	C1		
3331	C1	3458	B2	4454	B3	F437	C1		
3332	C1	3459	B3	4455	B3	F438	C2		
3333	C1	3460	B2	4456	B3	F442	A1		

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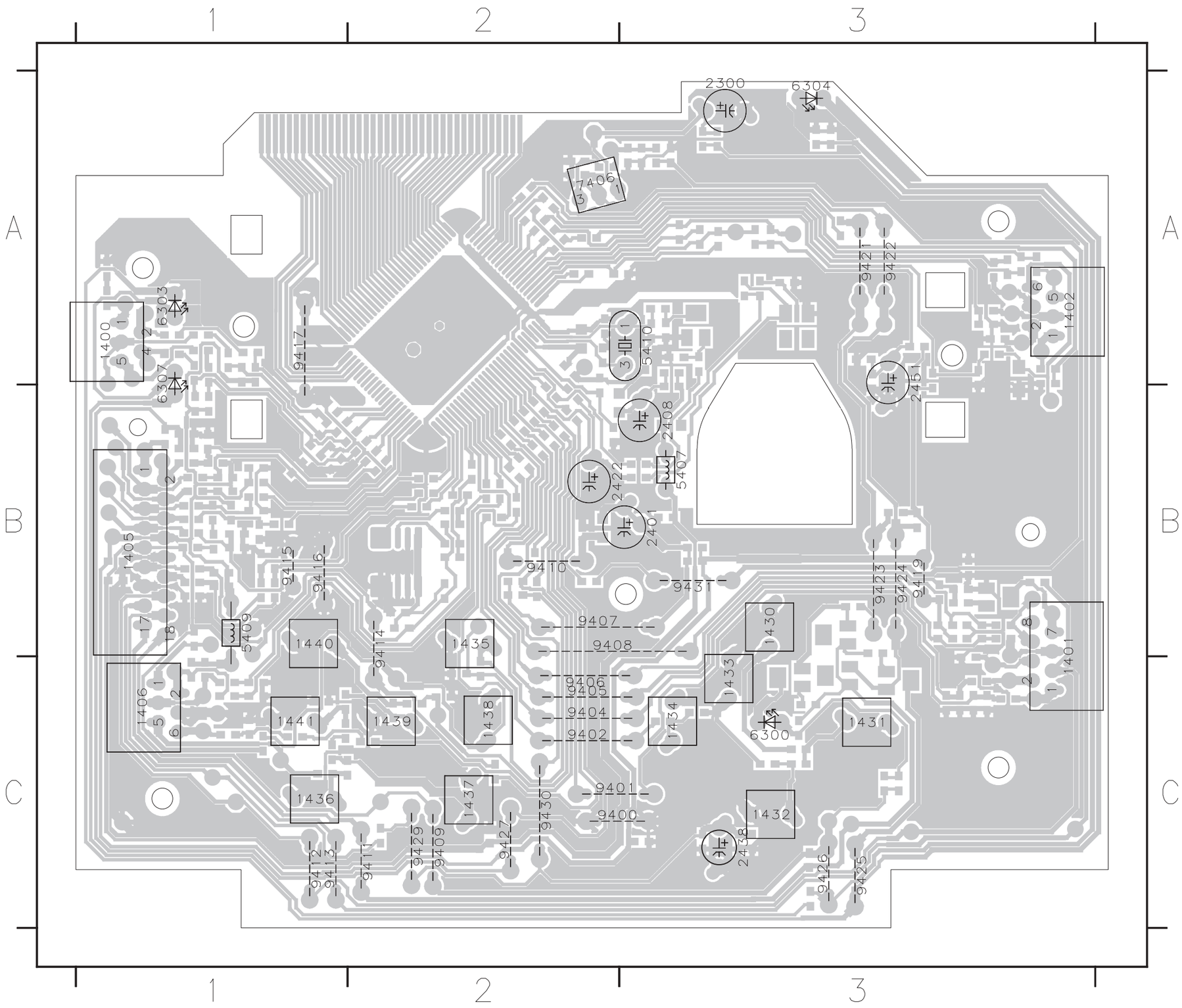
KEY BOARD - LAYOUT DIAGRAM
(COMPONENT SIDE VIEW)



1400 A1
1401 B3
1402 A3
1405 B1
1406 C1
1430 B3
1431 C3
1432 C3
1433 C3
1434 C3
1435 B2
1436 C1
1437 C2
1438 C2
1439 C2
1440 B1
1441 C1
2300 A3
2401 B3
2408 B3
2422 B2
2438 C3
2451 A3
5407 B3
5409 B1
5410 A3
6300 C3
6303 A1
6304 A3
6307 A1
7406 A2
9400 C2
9401 C2
9402 C2
9404 C2
9405 C2
9406 C2
9407 B2
9408 B2
9409 C2
9410 B2
9411 C2
9412 C1
9413 C1
9414 B2
9415 B1
9416 B1
9417 A1
9419 B3
9421 A3
9422 A3
9423 B3
9424 B3
9425 C3
9426 C3
9427 C2
9429 C2
9430 C2
9431 B3

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TUNER BOARD - CIRCUIT DIAGRAM

TUNER BOARD ECO6 /PORTABLE AUDIO

VERSION PROGRAMMING COMPONETS

VERSION	6120	3156	3157	3170	7111
/00 /02 FM/MW/LW	☒				
/00 /02 FM/MW		☒	☒	☒	☒
/01 FM/MW		☒		☒	☒
/14 FM-OIRT/MW		☒	☒		☒
/17 FM/AM			☒	☒	
/06 JAPAN				☒	☒

☒ component mounted

1105 A1
1121 F14
1122 E14
2101 A3
2103 C7
2104 A3
2106 B4
2107 F4
2108 F3
2109 F3
2110 B3
2111 B3
2112 B9
2119 H6
2120 H6
2122 I6
2123 I6
2124 I6
2125 H6
2126 E7
2127 E7
2128 B8
2129 C7
2130 F12
2131 F8
2132 F8
2133 F8
2134 I9
2135 I9
2136 H14
2137 H14
2138 F9
2139 G9
2140 G10
2141 F10
2144 F12
2145 E11
2146 D13
2147 E12
2148 D12
2149 H7
2150 A10
2152 E4
2153 E5
2155 D5
2159 F6
2161 C11
2163 D11
2164 F10
2165 C7
2166 D12
2167 E12
2169 G8
2186 H13
2187 H12
2188 I12
2189 I13
2190 G12
2191 H11
2192 G12
2193 G11
2194 G11
2195 G10
2196 H12
2197 H11
3101 E4
3102 D4
3103 C7
3104 A7
3105 B6
3106 B2
3107 C3
3108 D2
3109 D3
3113 B9
3119 A9
3123 H3
3125 H3
3128 I4
3132 H5
3134 H6
3137 I7
3141 E7
3142 E7
3143 G7
3144 G8
3145 F8
3152 H14
3153 H14
3155 F12
3156 C12
3157 C12
3158 E13
3159 D13
3160 D13
3161 D13
3166 F13
3167 F12
3169 D11
3170 C12
3176 G7
3180 I3
3181 E6
3186 F13
3187 H12
3188 H12
3189 H12
3190 H12
3191 I12
3192 I12
3193 I13
3194 I13
3195 I12
3196 I10
4101 E2
4102 E2
4104 I5
4105 A9
4110 C4
5102 E3
5103 F2
5109 A9
5110 B10
5111 A8
5112 A11
5114 B11
5119 G9
5121 E11
5122 H5
5123 G5
5130 E6
5131 C6
6103 A3
6105-1 B4
6105-2 G6
6106 B4
6120 B13
6130 D5
6131 C5
6181 G12
6182 G11
6183 H10
7101 B8
7102 C7
7103 H7
7104 D3
7105 D3
7109 H3
7111 C13
7119 A9
7122 I4
7124 I7
7180 H13
7181 I13
7182 I12
7183 H11
T102 A2
T103 A2
T105 E2
T106 E2
T109 B6
T110 F5
T111 F4
T112 F7
T113 A9
T114 A11
T115 A8
T116 F10
T117 G10
T118 F12
T120 E14
T121 E14
T122 E14
T123 E14
T124 G14
T125 F14
T126 F14
T127 F14
T128 C7
T140 F12
T141 F10
T142 F10

LEGEND

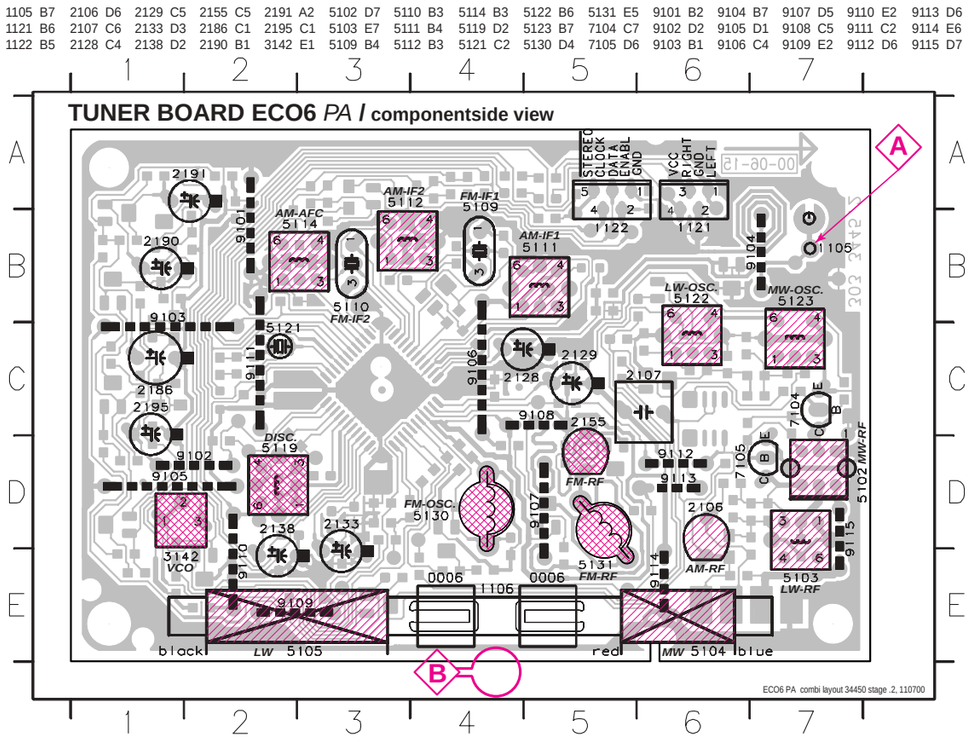
* ... only assembled in FM/AM-version
p ...for provision only
USA ... for USA version only
LW ... for LW version only
LW frame ... for LW version with frame aerial only
E_EU ... for East European version only
J ... for JAPAN version only

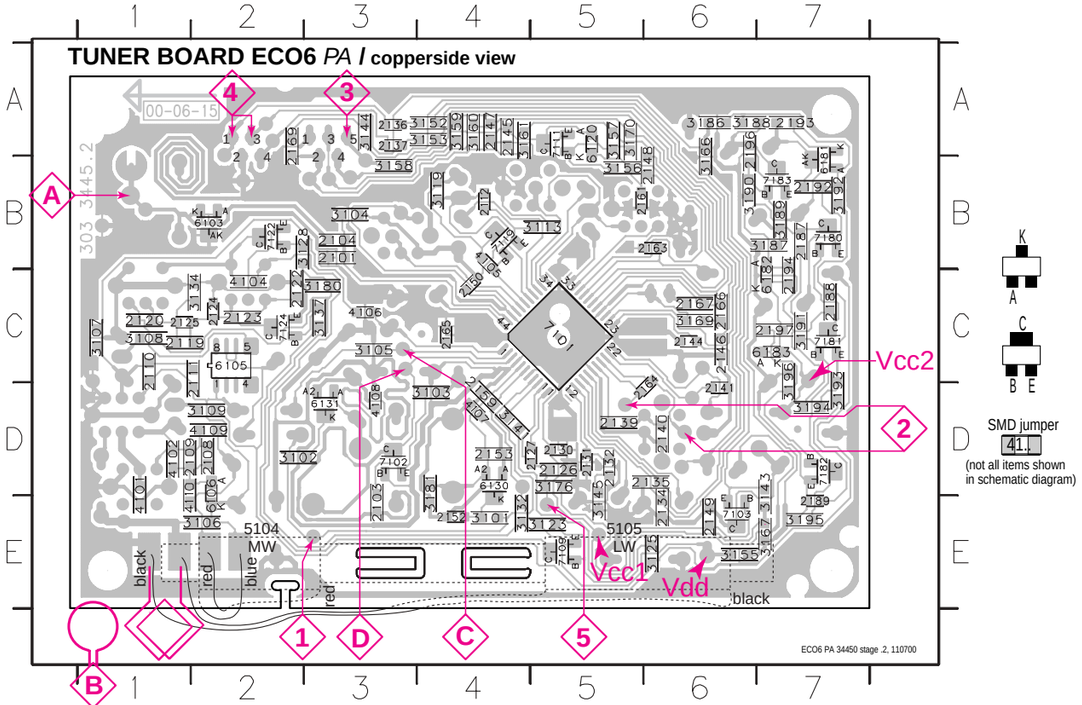
EVM

...V FM mode stereo
...V MW mode
...V LW mode

voltages measured while set is tuned to a strong transmitter

TUNER BOARD ECO6 - LAYOUT DIAGRAM





SMD jumper 41..
(not all items shown in schematic diagram)

These assembly drawings show a summary of all possible versions.
For components used in a specific version see schematic diagram respectively partslist.

TUNER ADJUSTMENT TABLE (ECO6 FM/MW- and FM/MW/LW - versions with ferrite antenna)

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
VARICAP ALIGNMENT						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)			108MHz	5130	◇1	8V –0.2V
			87.5MHz (65.81MHz)	check		4.3V –0.5V (1.2V –0.5V)
MW FM/AM-version, 10kHz grid 530 - 1700kHz			1700kHz	5123		8V –0.2V
			530kHz	check		1.1V –0.4V
FM/MW-version, 9kHz grid 531 - 1602kHz			1602kHz	5123		6.9V –0.2V
			531kHz	check		1.1V –0.4V
LW 153 - 279kHz			279kHz	5122		8V –0.2V
			153kHz	check		1.1V –0.4V
MW FM/MW/LW- version, 9kHz grid 531 - 1602kHz			1602kHz	5123		8V –0.2V
			531kHz	check		1.1V –0.4V
FM IF						
FM	10.7MHz, 45mV continuous wave	◇D	IC 7101 21 shortcircuit to block AFC 2141	5119	◇2	0 – 3 mV DC
FM RF						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	108MHz	◇A mod=1kHz Δf=–22.5kHz	108MHz	2155	◇4	MAX
	87.5MHz (65.81MHz)		87.5MHz (65.81MHz)	5131		
VCO						
FM	98MHz, 1mV continuous wave	◇A	98MHz	3142	◇3	152kHz –1kHz 1)
AM IF						
MW	450kHz connect pin 6 of IC 7101 (AM Osc.) with 2.2k‰ to Vcc	◇C Δf=–10kHz V_{RF} = 0.5mV (as low as possible)	IC 7101 36 100nF 220R	5111	◇5	max. f_o symmetric
			IC 7101 40 100nF 220R see remark 2)	5112		
AM AFC **MW**		◇C continuous wave V_{RF} = 2mV		5114	◇2	0 – 2 mV DC
AM RF 3)						
LW	198kHz	◇B Δf = –30kHz V_{RF} as low as possible	198kHz	5105 LW ferrite coil	◇5	max. f_o symmetric
MW FM/MW/LW- and FM/MW-version (9kHz grid) 531 - 1602kHz	1494kHz		1494kHz	2106		
	558kHz		558kHz	5104 MW ferrite coil		
MW FM/AM-version, 10kHz grid 530 - 1700kHz	1500kHz		1500kHz	2106		
	560kHz		560kHz	5104 MW ferrite coil		

ECO6, general with ferrite antenna, 070799

Use Service Testprogram. By selecting the TUNER TEST test frequencies will be stored as preset frequencies automatically.

1) If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)

2) RC network serves for damping the IF-filter while adjusting the other one.

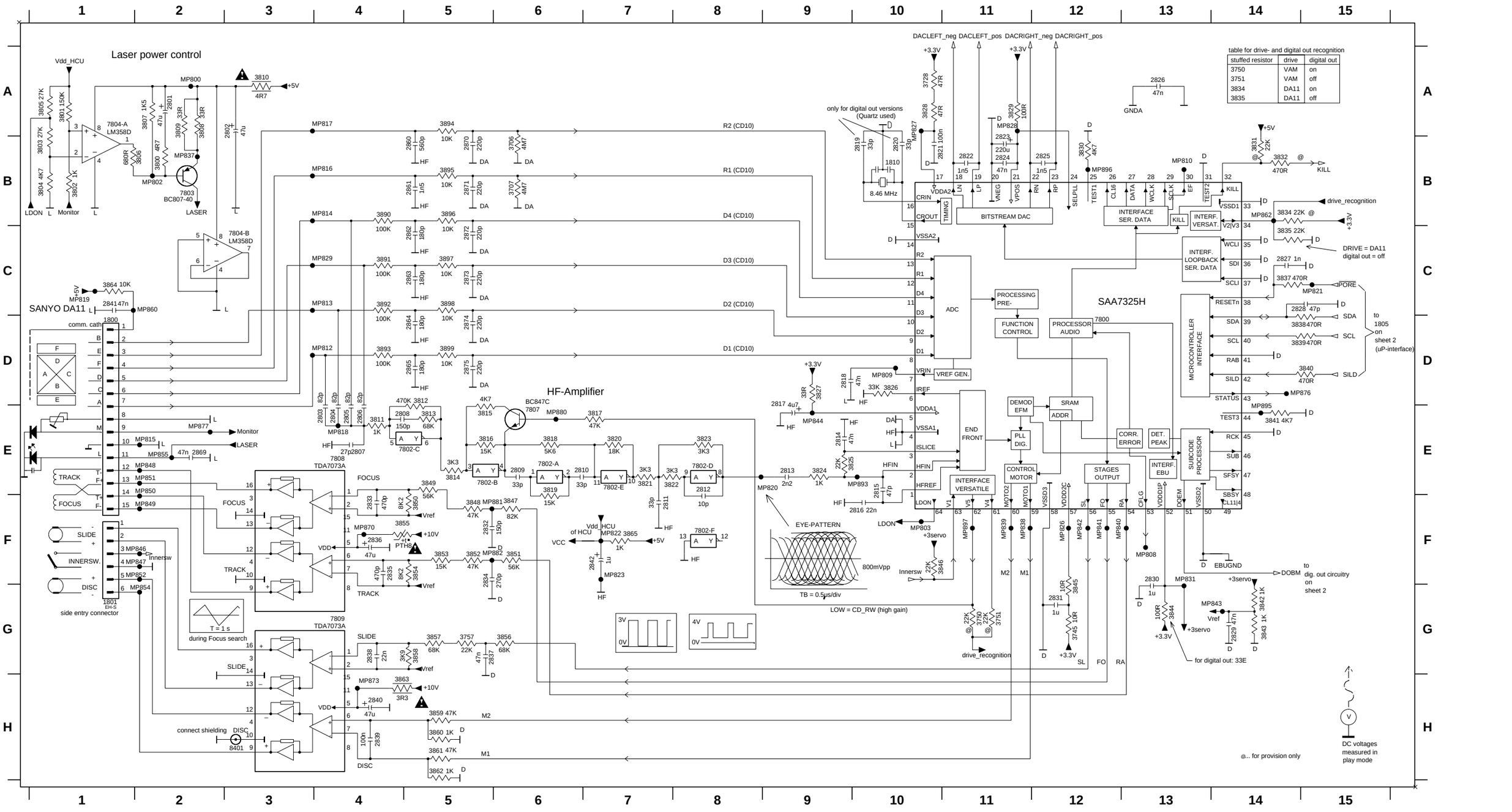
3) LW has to be aligned before MW.

Repeat

8 - 1

CD99 BOARD - CIRCUIT DIAGRAM

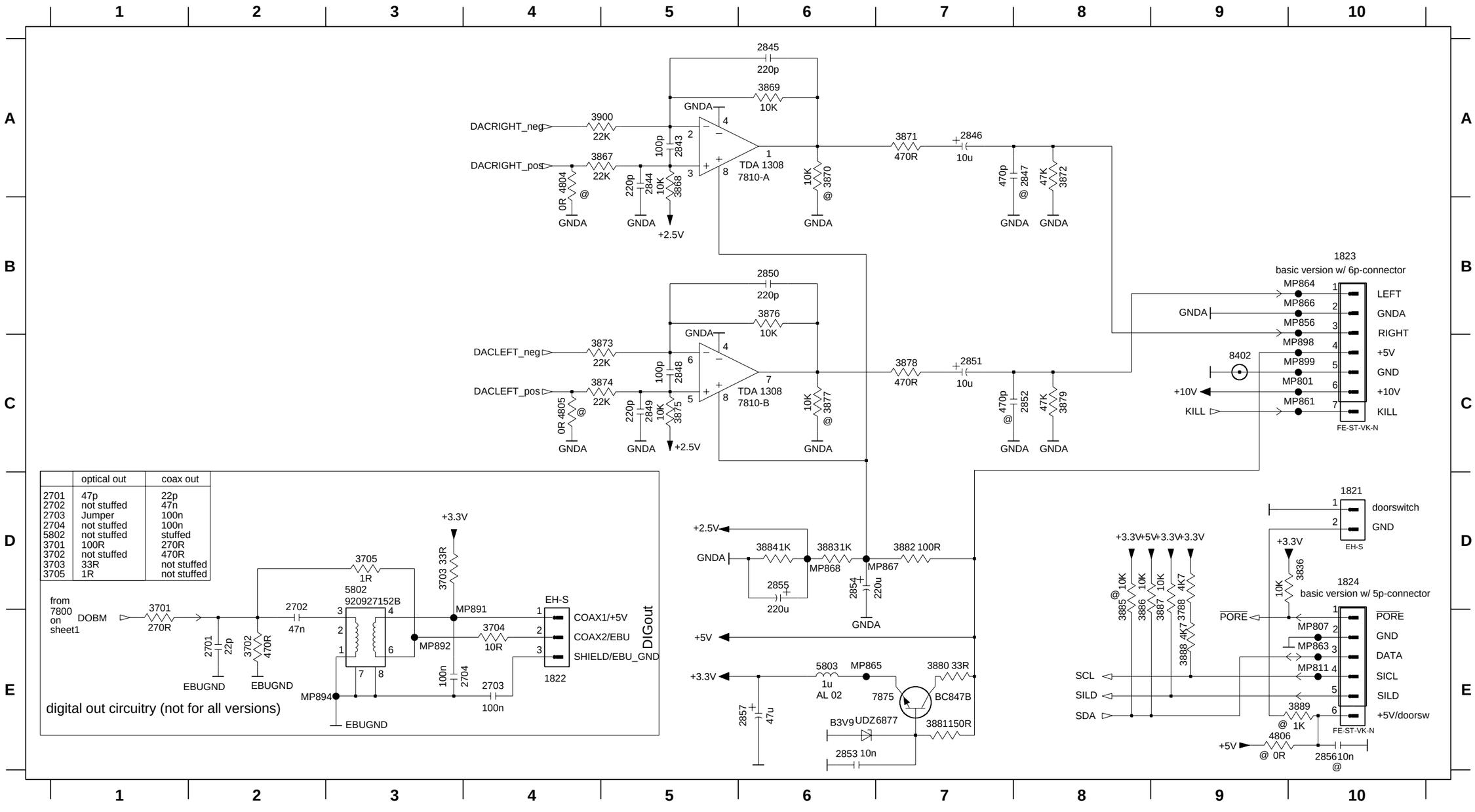
1800 D1	2807 E4	2815 E10	2823 B11	2831 G12	2839 H4	2864 D5	2875 D5	3800 B2	3808 A2	3816 E5	3824 E9	3832 B14	3842 G14	3850 F5	3858 G5	3890 B4	3898 C5	7802-F F8	MP800 A2	MP814 B4	MP822 F7	MP838 F11	MP847 F2	MP860 C2	MP882 F5
1801 G1	2808 E4	2816 F10	2824 B11	2832 F5	2840 H4	2865 D5	3706 B6	3801 A1	3809 A2	3817 E7	3825 E9	3834 B14	3843 G14	3851 F6	3859 H5	3891 C4	3899 D5	7803 B2	MP802 B2	MP815 E2	MP823 F7	MP839 F11	MP848 E2	MP862 B14	MP893 E10
2801 A2	2809 E6	2817 D9	2825 B12	2833 F4	2841 C1	2869 E2	3707 B6	3802 B1	3810 A3	3818 E6	3826 D10	3835 C14	3844 G13	3852 F5	3860 H5	3892 C4	7800 D12	7804-A A1	MP803 F10	MP816 B4	MP826 F12	MP840 F12	MP849 F2	MP870 F4	MP895 E14
2802 A3	2810 E6	2818 D9	2826 A13	2834 F5	2842 F7	2870 B5	3728 A10	3803 B1	3811 E4	3819 E6	3827 D9	3837 C14	3845 G12	3853 F5	3861 H5	3893 D4	7802-A E6	7804-B C3	MP808 F13	MP817 A4	MP827 A10	MP841 F12	MP850 E2	MP873 H4	MP896 B12
2803 E4	2811 F7	2819 B10	2827 C14	2835 F4	2860 B5	2871 B5	3745 G12	3804 B1	3812 D5	3820 E7	3828 A10	3838 D14	3846 F10	3854 F5	3862 H5	3894 A5	7802-B E5	7807 E6	MP809 D10	MP818 E4	MP828 A11	MP842 F12	MP851 E2	MP876 D14	MP897 F11
2804 E4	2812 E8	2820 B10	2828 C14	2836 F4	2861 B5	2872 C5	3750 G11	3805 A1	3813 E5	3821 E7	3829 A11	3839 D14	3847 F6	3855 F4	3863 H4	3895 B5	7802-C E5	7808 E4	MP810 B13	MP819 C1	MP829 C4	MP843 G14	MP852 F2	MP877 E2	
2805 E4	2813 E9	2821 B11	2829 G14	2837 G5	2862 C5	2873 C5	3751 G11	3806 B2	3814 E5	3822 E7	3830 B12	3840 D15	3848 F5	3856 G6	3864 C1	3896 B5	7802-D E8	7809 G4	MP812 D4	MP820 E9	MP831 F13	MP844 E9	MP854 G2	MP880 E6	
2806 E4	2814 E9	2822 B11	2830 F13	2838 G4	2863 C5	2874 D5	3757 G5	3807 A2	3815 E5	3823 E8	3831 B14	3841 E14	3849 E5	3857 G5	3865 F7	3897 C5	7802-E E7	8401 H3	MP813 C4	MP821 C15	MP837 B2	MP846 F2	MP855 E2	MP881 F5	



8 - 2

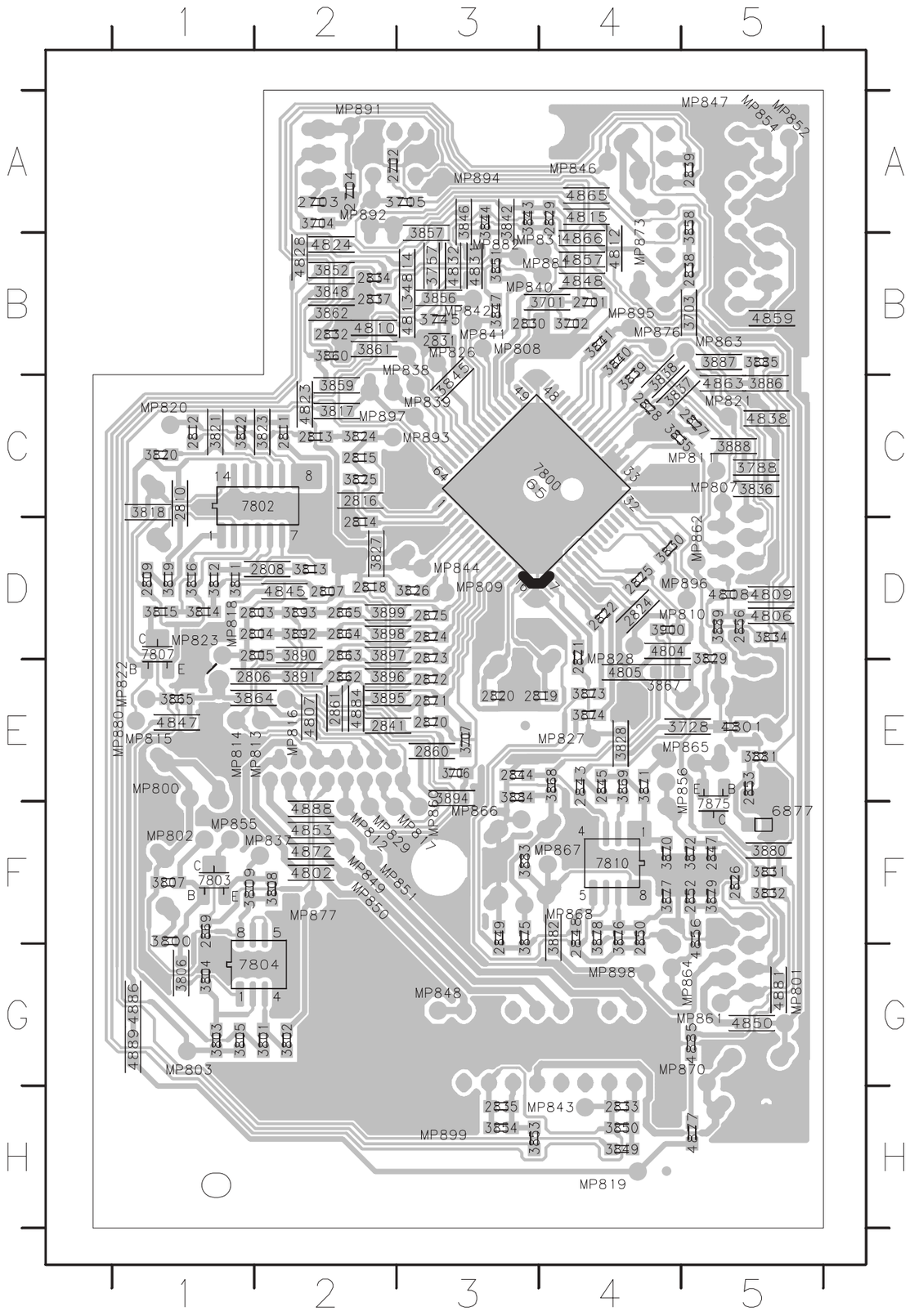
CD99 BOARD - CIRCUIT DIAGRAM

1821 D10	2702 E2	2845 A6	2850 B6	2855 D6	3703 D3	3867 A5	3872 A8	3877 C6	3882 D7	3887 E9	4805 C4	7810-A A5	MP807 E10	MP864 B10	MP891 E4
1822 E4	2703 E4	2846 A7	2851 C7	2856 E10	3704 E4	3868 A5	3873 C5	3878 C7	3883 D6	3888 E9	4806 E9	7810-B C5	MP811 E10	MP865 E6	MP892 E3
1823 B10	2704 E3	2847 A8	2852 C8	2857 E6	3705 D3	3869 A6	3874 C5	3879 C8	3884 D6	3889 E10	5802 D3	7875 E7	MP856 B10	MP866 B10	MP894 E2
1824 D10	2843 A5	2848 C5	2853 E6	3701 E1	3788 E9	3870 A6	3875 C5	3880 E7	3885 E8	3900 A5	5803 E6	8402 C9	MP861 C10	MP867 D7	MP898 C10
2701 E2	2844 A5	2849 C5	2854 D6	3702 E2	3836 D10	3871 A7	3876 B6	3881 E7	3886 E8	4804 A4	6877 E7	MP801 C10	MP863 E10	MP868 D6	MP899 C10



8 - 3

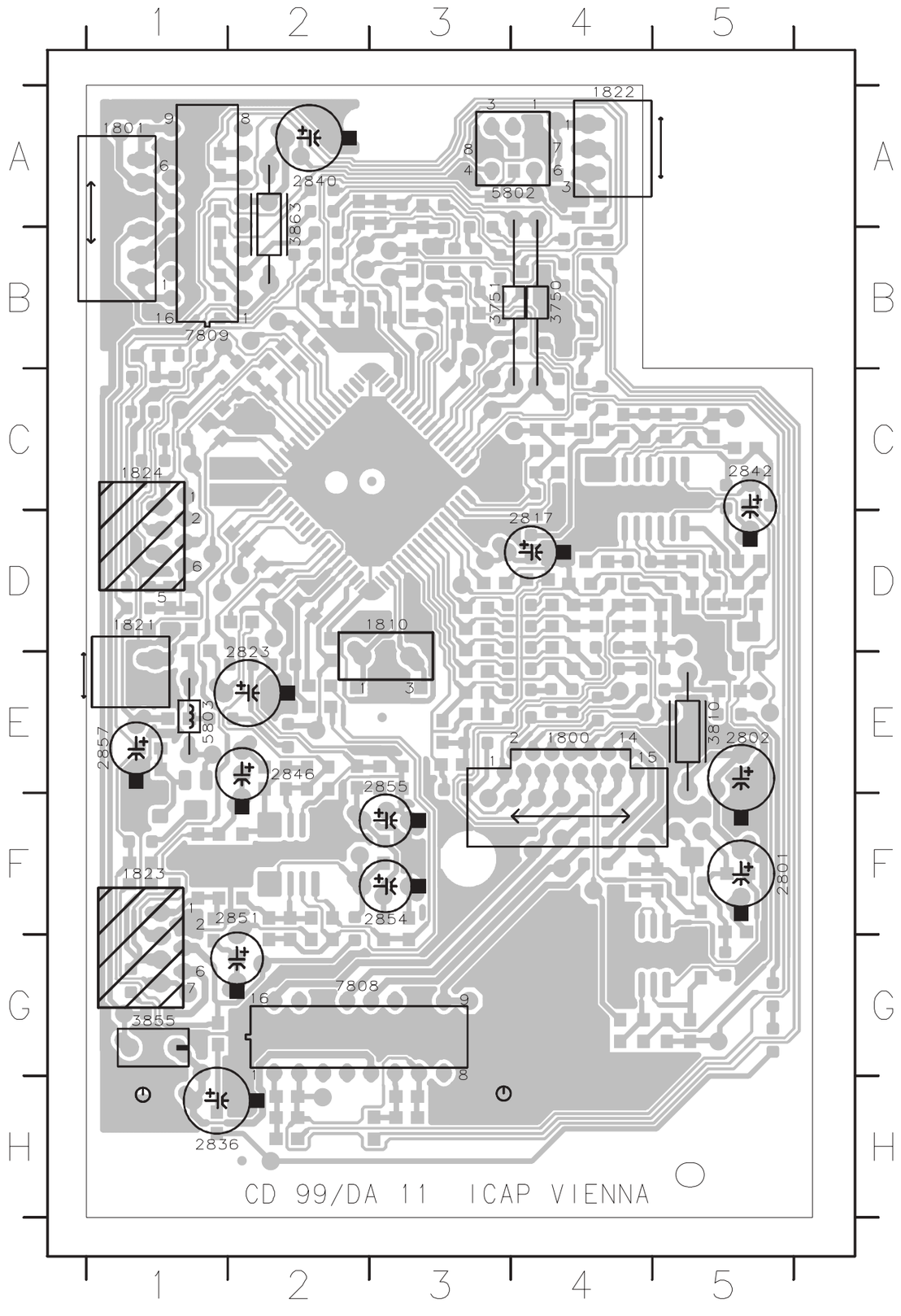
CD99 BOARD - LAYOUT DIAGRAM
(COPPER SIDE VIEW)



2701 B4	2873 D3	3847 B3	4810 B2	MP826 B3
2702 A2	2874 D3	3848 B2	4812 B4	MP827 E4
2703 A2	2875 D3	3849 H4	4813 B3	MP828 D4
2704 A2	3701 B4	3850 H4	4814 B3	MP829 F2
2803 D2	3702 B4	3851 B3	4815 A4	MP831 B4
2804 D2	3703 B5	3852 B2	4823 C2	MP837 F2
2805 D2	3704 A2	3853 H3	4824 B2	MP838 B3
2806 E1	3705 A3	3854 H3	4828 B2	MP839 C3
2807 D2	3706 E3	3856 B3	4831 B3	MP840 B3
2808 D2	3707 E3	3857 B3	4832 B3	MP841 B3
2809 D1	3728 E5	3858 A5	4838 C5	MP842 B3
2810 C1	3745 B3	3859 C2	4845 D2	MP843 H4
2811 C2	3757 B3	3860 B2	4847 E1	MP844 D3
2812 C1	3788 C5	3861 B2	4848 B4	MP846 A4
2813 C2	3800 F1	3862 B2	4850 G5	MP847 A5
2814 D2	3801 G2	3864 E1	4853 F2	MP848 G3
2815 C2	3802 G2	3865 E1	4856 F5	MP849 F2
2816 C2	3803 G1	3867 E4	4857 B4	MP850 F2
2818 D2	3804 G1	3868 E4	4859 B5	MP851 F3
2819 E4	3805 G1	3869 E4	4863 C5	MP852 A5
2820 E3	3806 G1	3870 F4	4865 A4	MP854 A5
2821 D4	3807 F1	3871 E4	4866 B4	MP855 F1
2822 D4	3808 F2	3872 F5	4872 F2	MP856 E5
2824 D4	3809 F1	3873 E4	4877 H5	MP860 F3
2825 D4	3811 D1	3874 E4	4881 G5	MP861 G5
2826 F5	3812 D1	3875 F3	4884 E2	MP862 D5
2827 C5	3813 D2	3876 F4	4885 G5	MP863 B5
2828 C4	3814 D1	3877 F4	4886 G1	MP864 G5
2829 A4	3815 D1	3878 F4	4888 F2	MP865 E5
2830 B3	3816 D1	3879 F5	4889 G1	MP866 F3
2831 B3	3817 C2	3880 F5	6877 F5	MP867 F4
2832 B2	3818 C1	3881 E5	7800 C4	MP868 F4
2833 H4	3819 D1	3882 F4	7802 C2	MP870 G5
2834 B2	3820 C1	3883 F3	7803 F1	MP873 B4
2835 H3	3821 C1	3884 E3	7804 G2	MP876 B4
2837 B2	3822 C1	3885 B5	7807 D1	MP877 F2
2838 B5	3823 C2	3886 C5	7810 F4	MP880 E1
2839 A5	3824 C2	3887 B5	7875 F5	MP881 B4
2841 E2	3825 C2	3888 C5	MP800 E1	MP882 B3
2843 E4	3826 D3	3889 D5	MP801 G5	MP891 A2
2844 E3	3827 D2	3890 D2	MP802 F1	MP892 A2
2845 E4	3828 E4	3891 E2	MP803 G1	MP893 C3
2847 F5	3829 D5	3892 D2	MP807 C5	MP894 A3
2848 F4	3830 D4	3893 D2	MP808 B3	MP895 B4
2849 F3	3831 F5	3894 E3	MP809 D3	MP896 D5
2850 F4	3832 F5	3895 E2	MP810 D5	MP897 C2
2852 F5	3834 D5	3896 E2	MP811 C5	MP898 G4
2853 E5	3835 C4	3897 D2	MP812 F2	MP899 H3
2856 D5	3836 C5	3898 D2	MP813 E2	
2860 E3	3837 C4	3899 D2	MP814 E1	
2861 E2	3838 C4	3900 D4	MP815 E1	
2862 E2	3839 C4	4801 E5	MP816 E2	
2863 D2	3840 B4	4802 F2	MP817 F3	
2864 D2	3841 B4	4804 D4	MP818 D1	
2865 D2	3842 A3	4805 E4	MP819 H4	
2869 F1	3843 A3	4806 D5	MP820 C1	
2870 E3	3844 A3	4807 E2	MP821 C5	
2871 E3	3845 C3	4808 D5	MP822 E1	
2872 E3	3846 A3	4809 D5	MP823 D1	

8 - 4

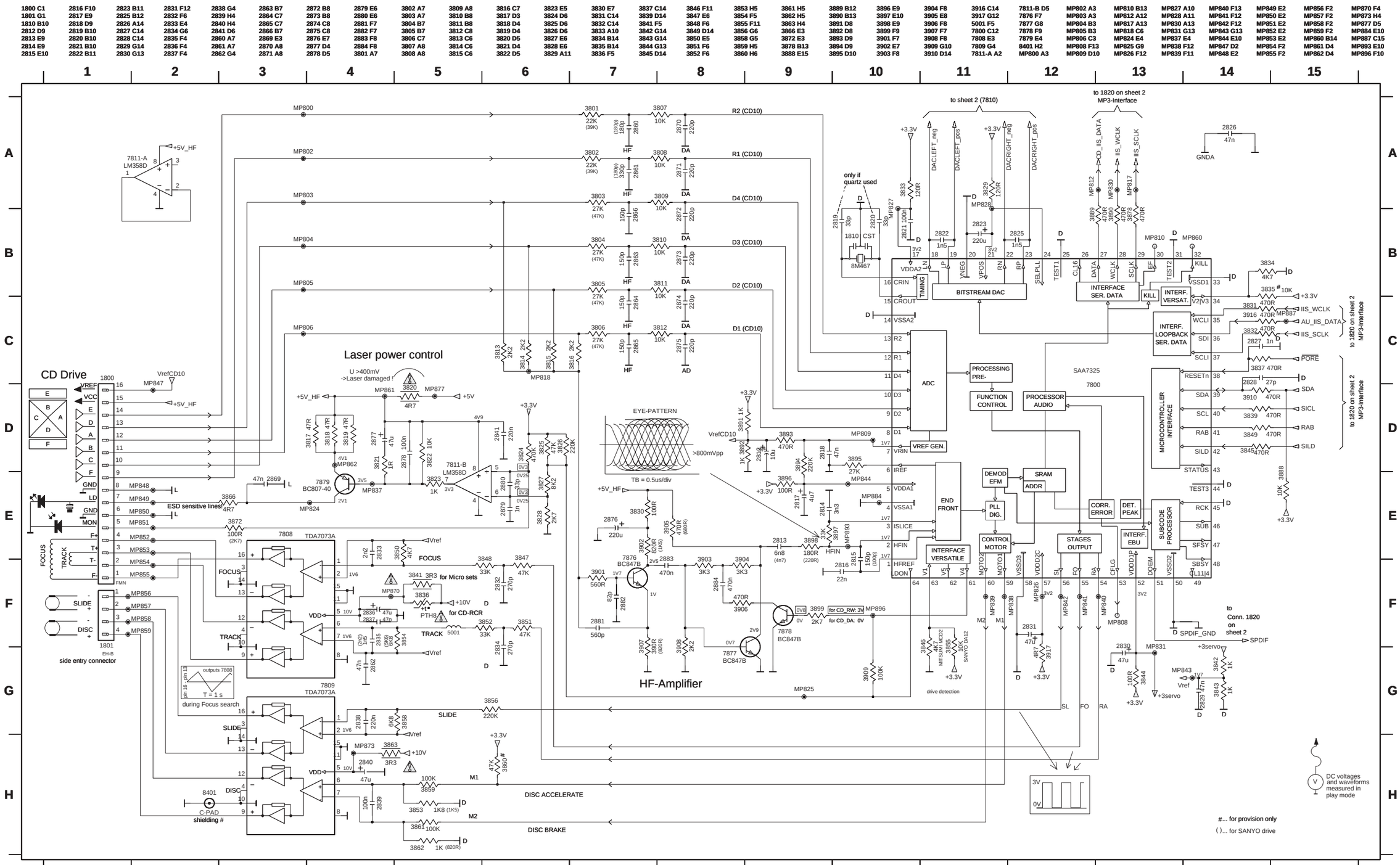
CD99 BOARD - LAYOUT DIAGRAM (COMPONENT SIDE VIEW)



1800 F4
1801 A1
1810 D3
1821 E1
1822 A4
1823 G1
1824 D1
2801 F5
2802 E5
2817 D4
2823 E2
2836 G1
2840 A2
2842 C5
2846 E2
2851 G2
2854 F3
2855 E3
2857 E1
3750 B4
3751 B4
3810 E5
3855 G1
3863 A2
5802 A4
5803 E1
7808 G2
7809 A1
8401 H3
8402 H1

9 - 1

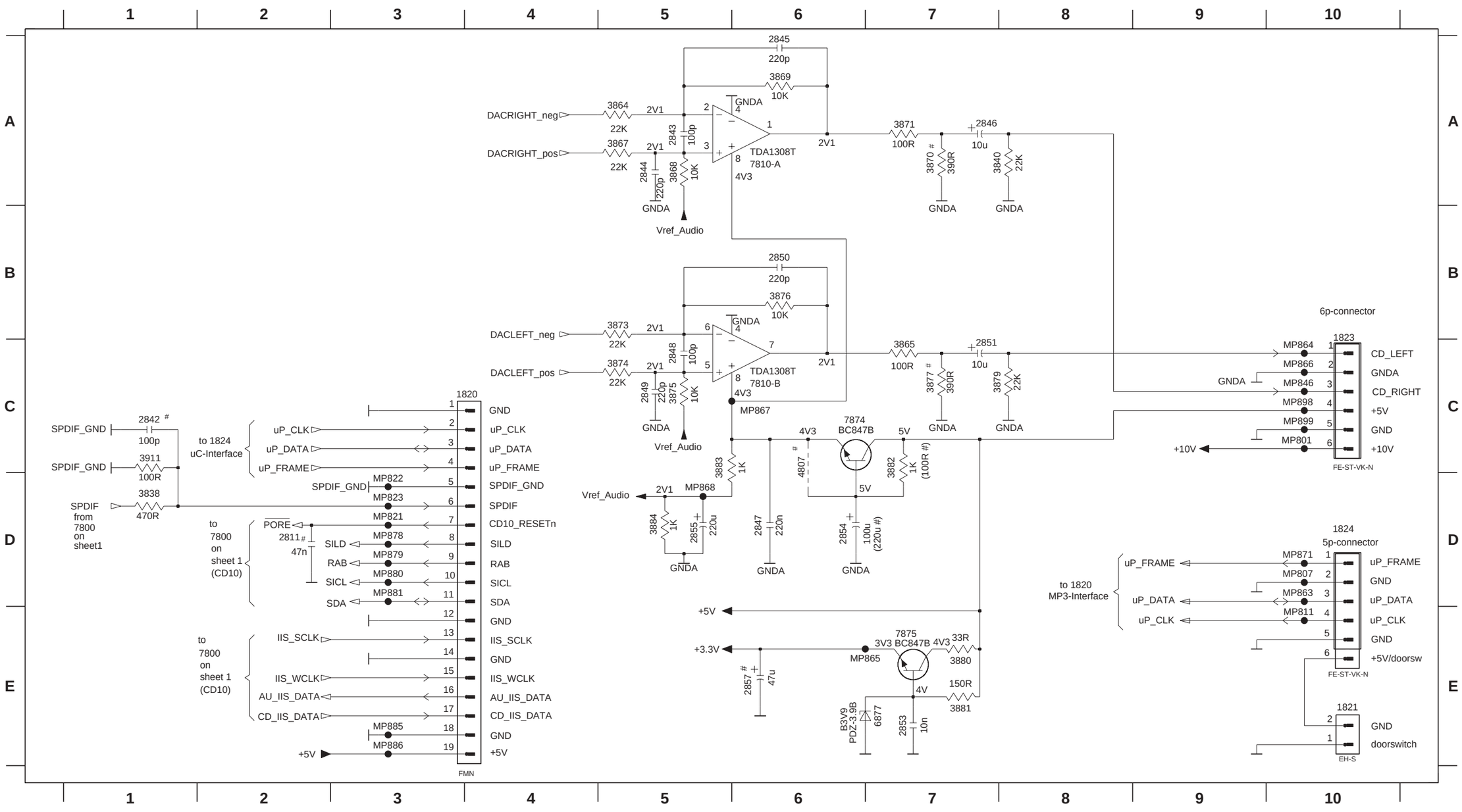
MP3 BOARD - CIRCUIT DIAGRAM



9 - 2

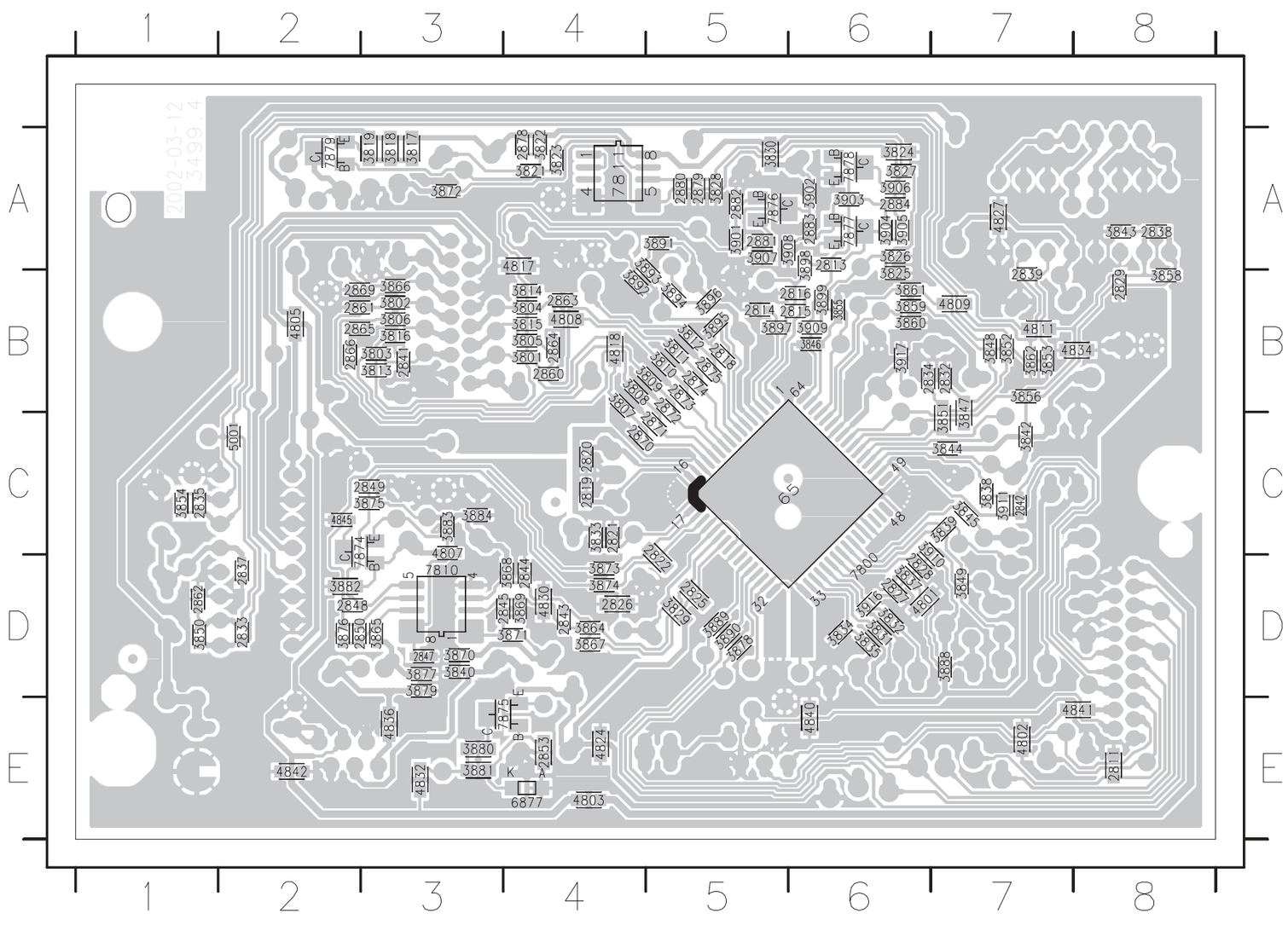
MP3 BOARD- CIRCUIT DIAGRAM

1820 C3	2811 D2	2845 A6	2849 C5	2854 D6	3840 A7	3868 A5	3873 B5	3877 C7	3882 C7	4807 C6	7874 C6	MP811 E10	MP846 C10	MP866 C10	MP878 D3	MP885 E3
1821 E10	2842 C1	2846 A7	2850 B6	2855 D5	3864 A5	3869 A6	3874 C5	3879 C7	3883 C5	6877 E7	7875 E7	MP821 D3	MP863 D10	MP867 C6	MP879 D3	MP886 E3
1823 C10	2843 A5	2847 D6	2851 C7	2857 E6	3865 C7	3870 A7	3875 C5	3880 E7	3884 D5	7810-A A6	MP801 C10	MP822 D3	MP864 C10	MP868 D5	MP880 D3	MP898 C10
1824 D10	2844 A5	2848 C5	2853 E7	3838 D1	3867 A5	3871 A7	3876 B6	3881 E7	3911 C1	7810-B C6	MP807 D10	MP823 D3	MP865 E6	MP871 D10	MP881 D3	MP899 C10



9 - 3

MP3 BOARD - LAYOUT DIAGRAM
(COPPER SIDE VIEW)



2811	E8	2878	A4	3843	A8	3894	B5	7876	A5
2813	A6	2879	A5	3844	C7	3895	B5	7877	A6
2814	B5	2880	A5	3845	C7	3896	B5	7878	A6
2815	B6	2881	A5	3846	B6	3897	B5	7879	A2
2816	B6	2882	A5	3847	C7	3898	A6		
2818	B5	2883	A6	3848	B7	3899	B6		
2819	C4	2884	A6	3849	D7	3901	A5		
2820	C4	3801	B4	3850	D1	3902	A6		
2821	C4	3802	B3	3851	C7	3903	A6		
2822	D5	3803	B3	3852	B7	3904	A6		
2825	D5	3804	B4	3853	B7	3905	A6		
2826	D4	3805	B4	3854	C1	3906	A6		
2827	D6	3806	B3	3855	B6	3907	A5		
2828	D6	3807	B4	3856	B7	3908	A5		
2829	B8	3808	B4	3858	B8	3909	B6		
2832	B7	3809	B5	3859	B6	3910	C7		
2833	D2	3810	B5	3860	B6	3911	C7		
2834	B6	3811	B5	3861	B6	3916	D6		
2835	C1	3812	B5	3862	B7	3917	B6		
2837	D2	3813	B3	3864	D4	4801	D6		
2838	A8	3814	B4	3865	D3	4802	E7		
2839	B7	3815	B4	3866	B3	4803	E4		
2841	B3	3816	B3	3867	D4	4805	B2		
2842	C7	3817	A3	3868	D4	4807	C3		
2843	D4	3818	A3	3869	D4	4808	B4		
2844	D4	3819	A3	3870	D3	4809	B7		
2845	D3	3821	A4	3871	D4	4811	B7		
2847	D3	3822	A4	3872	A3	4817	A4		
2848	D2	3823	A4	3873	D4	4818	B4		
2849	C3	3824	A6	3874	D4	4824	E4		
2850	D2	3825	B6	3875	C3	4827	A7		
2853	E4	3826	A6	3876	D2	4830	D4		
2860	B4	3827	A6	3877	D3	4832	E3		
2861	B2	3828	A5	3878	D5	4834	B8		
2862	D1	3829	D5	3879	D3	4836	E3		
2863	B4	3830	A5	3880	E3	4840	E6		
2864	B4	3831	D6	3881	E3	4841	E8		
2865	B2	3832	D6	3882	D2	4842	E2		
2866	B2	3833	C4	3883	C3	4845	C2		
2869	B2	3834	D6	3884	C3	5001	C2		
2870	C4	3835	D6	3888	D7	6877	E4		
2871	C5	3837	D6	3889	D5	7800	D6		
2872	B5	3838	C7	3890	D5	7810	D3		
2873	B5	3839	C7	3891	A5	7811	A4		
2874	B5	3840	D3	3892	B4	7874	C2		
2875	B5	3842	C7	3893	B5	7875	E3		

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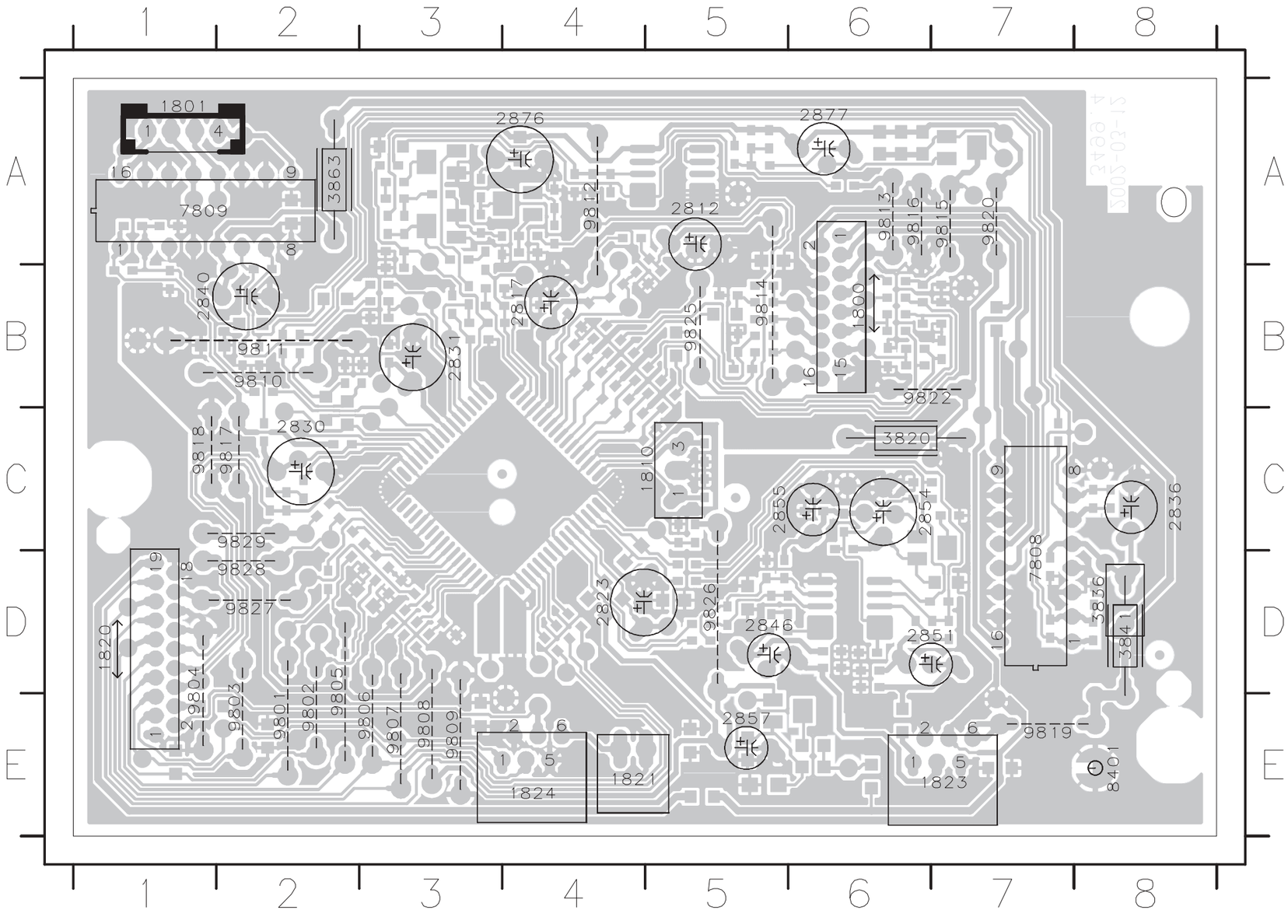
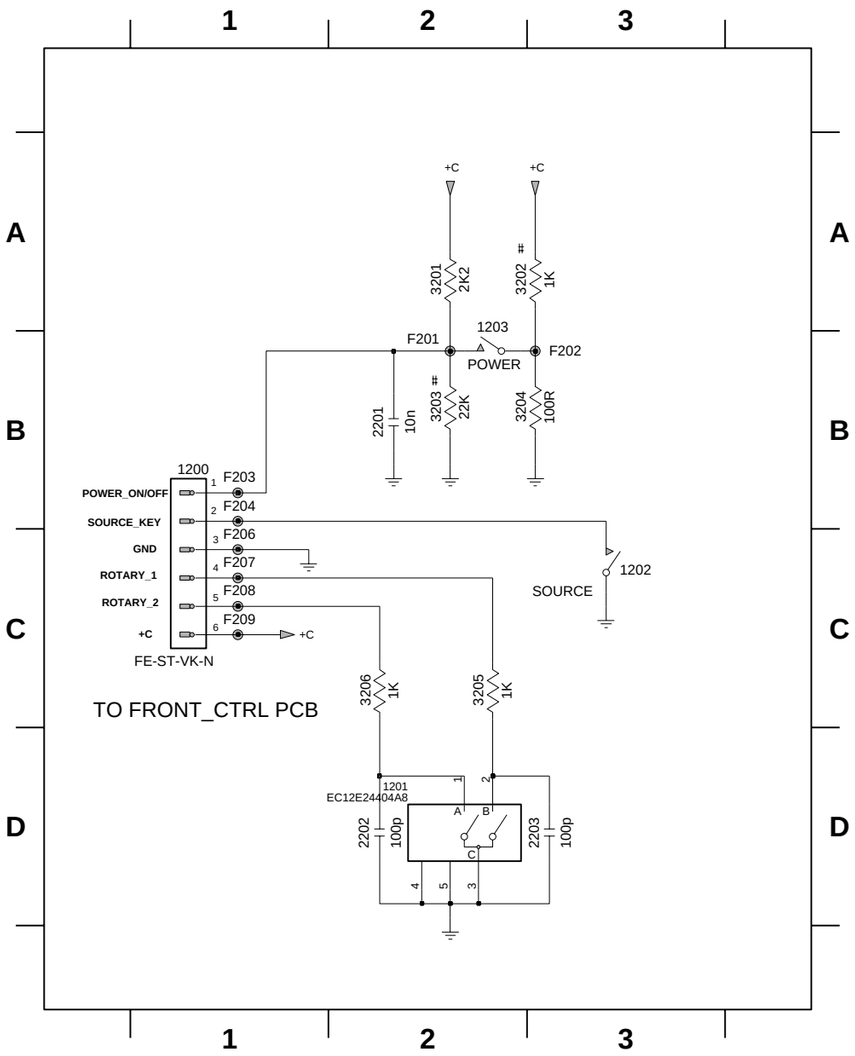
MP3 BOARD - LAYOUT DIAGRAM
(COMPONENT SIDE VIEW)



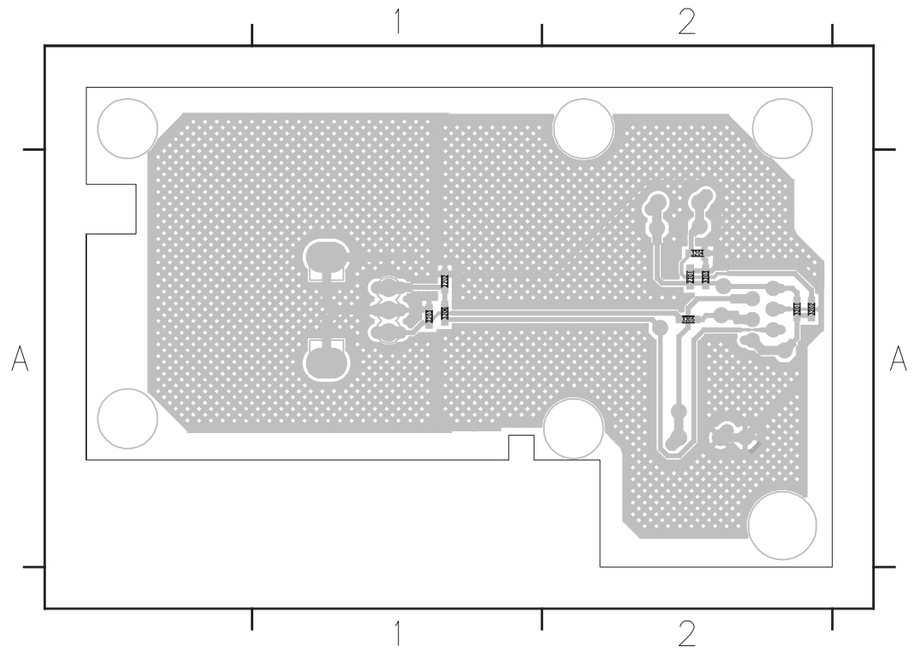
1800	B6	9819	E7
1801	A1	9820	A7
1810	C5	9822	B6
1820	D1	9825	B5
1821	E4	9826	D5
1823	E7	9827	D2
1824	E4	9828	D2
2812	A5	9829	C2
2817	B4		
2823	D4		
2830	C2		
2831	B3		
2836	C8		
2840	B1		
2846	D5		
2851	D6		
2854	C6		
2855	C5		
2857	E5		
2876	A4		
2877	A6		
3820	C6		
3836	D8		
3841	D8		
3863	A2		
7808	D7		
7809	A1		
8401	E8		
9801	E2		
9802	E2		
9803	E2		
9804	D1		
9805	D2		
9806	E3		
9807	E3		
9808	E3		
9809	E3		
9810	B2		
9811	B2		
9812	A4		
9813	A6		
9814	B5		
9815	A7		
9816	A6		
9817	C2		
9818	C1		

VOLUME BOARD - CIRCUIT DIAGRAM

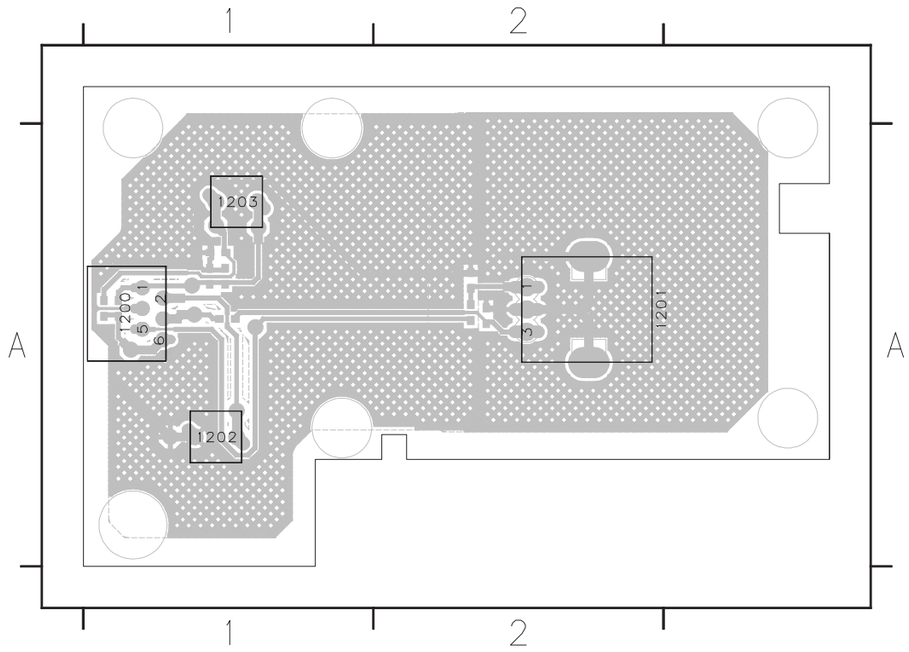
1200 B1	1203 B2	2203 D3	3203 B2	3206 C2	F203 B1	F207 C1
1201 D2	2201 B2	3201 A2	3204 B2	F201 B2	F204 B1	F208 C1
1202 C3	2202 D2	3202 A2	3205 C2	F202 B3	F206 C1	F209 C1



VOLUME BOARD - LAYOUT DIAGRAM



2201 A2
2202 A1
2203 A1
3201 A2
3202 A2
3203 A2
3204 A2
3205 A2
3206 A1



1200 A1
1201 A2
1202 A1
1203 A1

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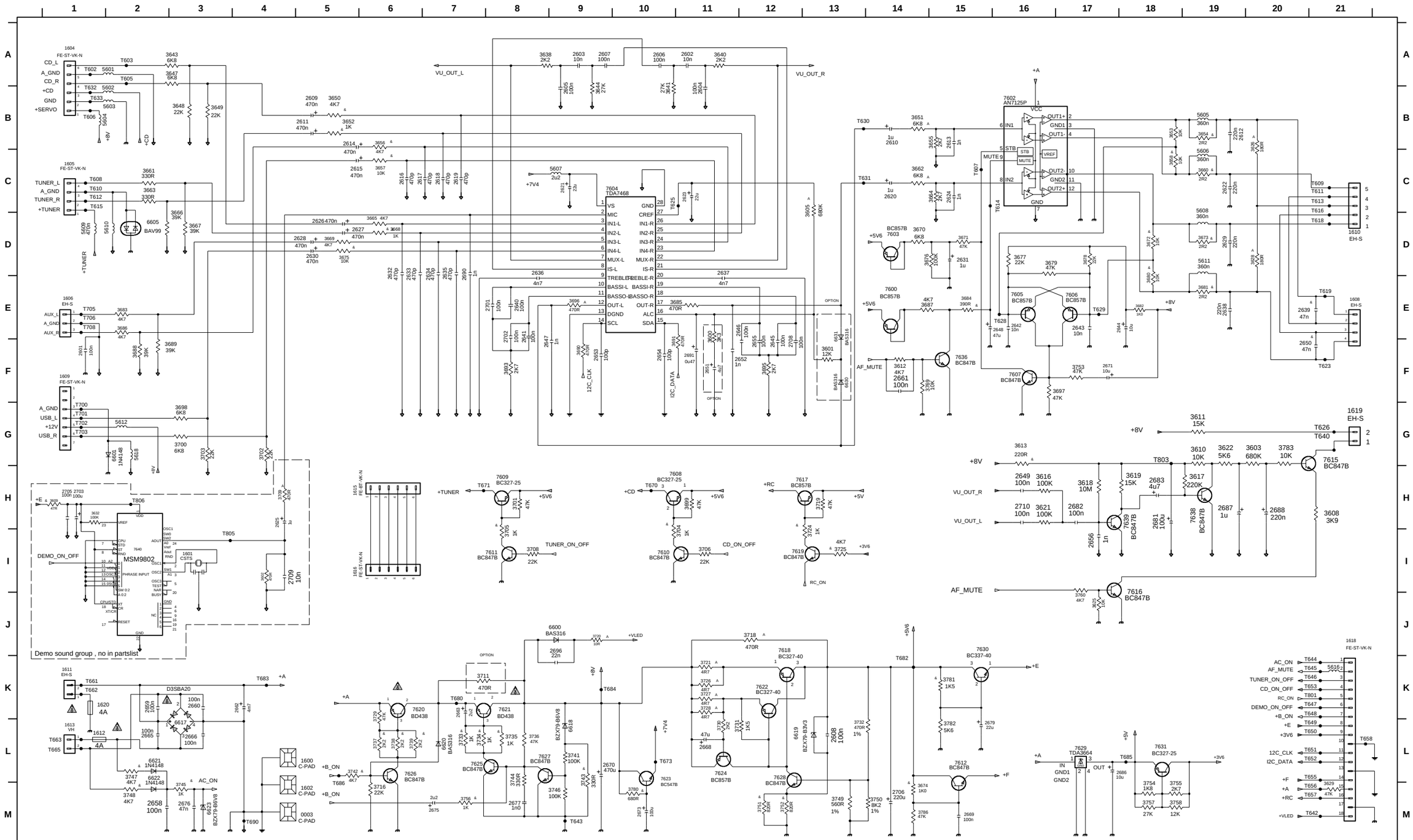
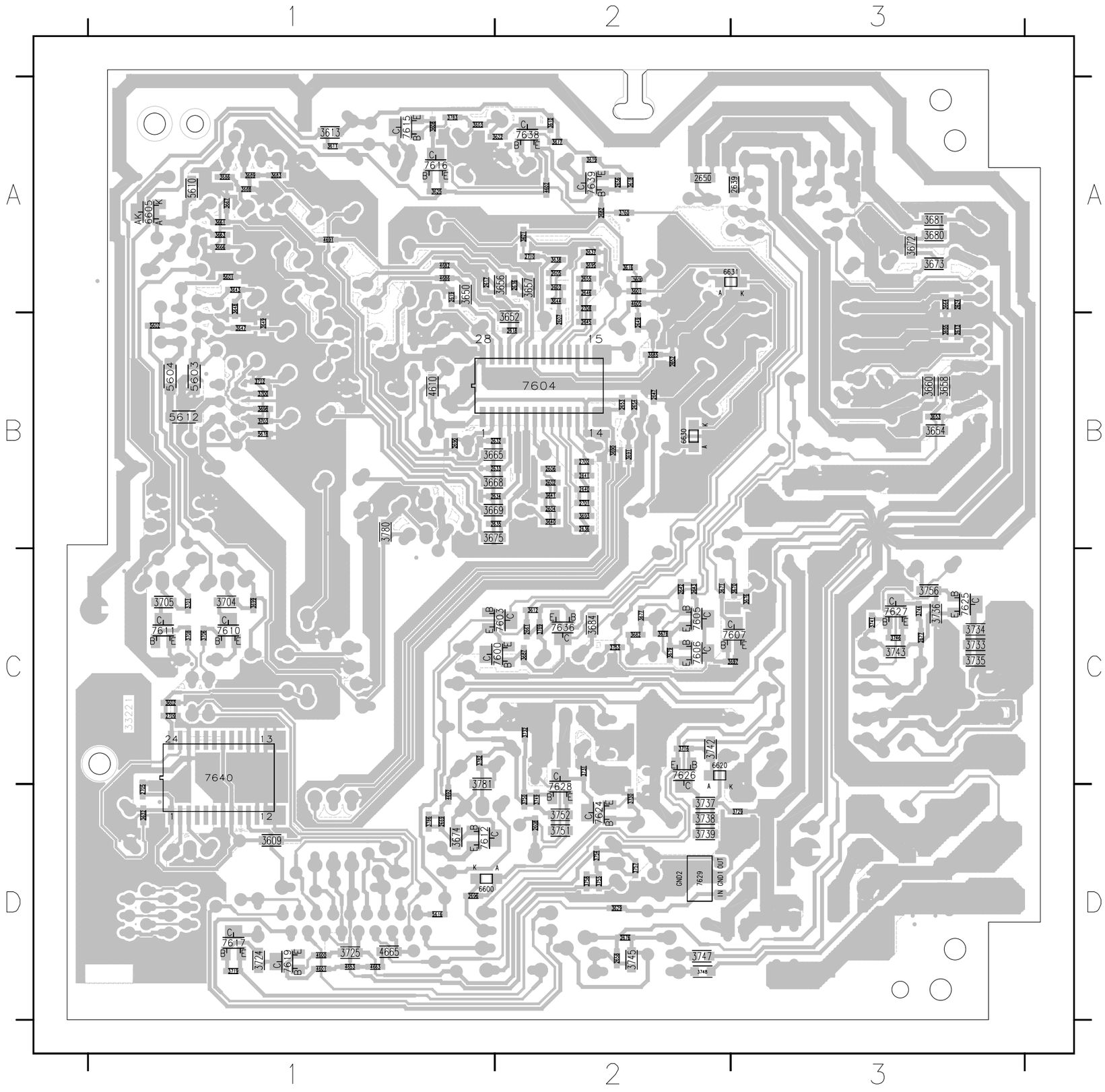
POWER BOARD - CIRCUIT DIAGRAM

0003 M5 1600 L5 1601 I3 1602 M5 1604 A1 1605 C1 1606 E1 1608 E21 1609 F1
1610 D21 1611 K1 1612 L1 1613 L1 1615 H5 1616 I5 1618 J21 1619 G21 1620 K1
2601 F1 2602 A11 2603 A9 2604 B11 2605 B9 2606 A10 2607 A9 2608 L13 2609 B5
2610 B14 2611 B5 2612 B19 2613 B15 2614 B5 2615 C5 2616 C6 2617 C6 2618 C7
2619 C7 2620 C14 2621 C9 2622 C19 2623 C11 2624 C15 2625 H4 2626 D5 2627 D5
2628 D5 2629 D19 2630 D5 2631 D15 2632 D6 2633 D6 2634 D7 2635 D7 2636 D8
2637 D11 2638 E19 2639 E20 2640 E8 2641 E8 2642 E16 2643 E17 2644 E18 2645 F12
2646 E12 2647 F8 2648 E16 2649 H16 2650 F20 2651 F11 2652 F12 2653 F9 2654 F10
2655 F12 2656 I17 2658 M2 2659 K2 2660 K3 2661 F14 2662 K4 2663 K7 2665 L2
2666 L3 2668 L11 2669 M15 2670 L9 2671 F17 2673 M10 2674 M3 2675 M7 2676 M3
2677 M8 2679 L15 2681 H18 2682 H17 2683 H18 2686 L18 2687 H18 2688 H20 2690 D7
2691 F11 2695 I4 2696 J9 2701 E8 2702 E8 2703 H1 2705 H1 2706 M14 2708 F12
2709 I4 2710 H16 3600 E11 3601 F13 3602 I4 3603 G20 3605 C13 3608 H21 3609 H1
3610 G19 3611 G19 3612 F14 3613 G16 3616 H16 3617 H19 3618 H17 3619 H18
3621 H16 3622 G19 3625 J17 3626 B20 3628 D20 3629 M21 3632 H1 3638 A8 3640 A11
3641 B10 3643 A3 3644 B9 3647 A3 3648 B3 3649 B3 3650 B5 3651 B14 3652 B5
3653 B18 3654 B19 3655 B15 3656 B6 3657 C6 3658 C18 3660 C19 3661 C2 3662 C14
3663 C2 3664 C15 3665 D6 3666 D3 3667 D3 3668 E11 3669 D5 3670 D14 3671 D15
3672 D18 3673 D19 3674 M14 3675 D6 3676 D14 3679 D16 3680 E18 3681 E19
3683 E2 3684 E15 3685 E11 3687 E14 3688 F2 3689 F3 3690 F9 3691 F10 3693 F8
3695 F12 3696 E9 3697 F17 3698 G3 3699 H11 3700 G3 3701 H8 3702 G4 3703 G3
3704 I11 3705 I8 3706 I11 3708 I8 3709 H4 3711 K7 3718 J12 3719 H13 3720 J9
3721 K11 3724 I13 3725 I13 3726 K11 3727 K11 3728 K11 3729 K6 3730 L11
3731 L11 3732 L13 3733 L7 3734 L7 3735 L8 3736 L8 3737 L6 3738 L6 3739 L6
3741 L9 3742 L5 3743 L9 3744 L8 3745 M3 3746 M9 3747 L2 3748 M2 3749 M13
3750 M14 3751 M12 3752 M12 3753 F17 3754 M18 3755 M18 3756 M7 3757 M18
3758 M18 3760 J17 3769 F15 3780 M10 3781 K15 3782 L15 3783 G20 3786 M14
5601 A2 5602 B2 5603 B19 5604 B1 5605 C19 5606 C19 5607 C9 5608 D19 5609 D1
5610 D1 5611 D19 5612 G2 5616 K21 5618 G2 6600 J9 6601 G2 6605 D2 6617 L3
6618 L9 6619 L12 6620 L7 6621 L2 6622 L2 6623 M3 6630 F13 6631 E13 6639 H13
7600 C14 7602 B16 7603 D14 7604 C9 7605 E16 7606 I8 7607 F16 7608 H11
7609 B8 7610 I10 7611 K8 7612 L15 7615 G21 7616 I18 7617 H13 7618 I12
7619 I3 7620 K6 7621 K8 7622 L2 7623 L10 7624 L11 7625 L7 7626 L6 7627 L17
7629 A2 7630 A2 7631 C13 7636 E16 7638 H19 7639 H18 7640 I2 7646 M9
7652 L21 7655 L21 7656 M21 7657 M21 7661 K1 7665 L1 7670 H10 7671 H7
7673 L10 7680 K7 7682 K14 7683 K4 7684 K9 7686 M5 7690 M4 7700 G1 7701 G1
7702 G1 7703 G1 7705 E1 7706 E1 7708 E1 7801 K21 7803 G18 7805 I3 7806 H2



11 - 2

POWER BOARD - LAYOUT DIAGRAM
(COPPER SIDE VIEW)



2602	B2	3664	A3	4653	D1
2603	A2	3665	B1	4663	D1
2604	B2	3666	A1	4665	D1
2605	A2	3667	A1	4682	A1
2606	B2	3668	B1	4686	A1
2607	B2	3669	B1	4691	A1
2608	D2	3670	C3	4692	D1
2613	B3	3671	C2	5601	A1
2616	A2	3672	A3	5602	B1
2617	A1	3673	A3	5603	B1
2618	B2	3674	D1	5604	B1
2619	A1	3675	B1	5610	A1
2624	A3	3676	C3	5612	B1
2632	B2	3677	C2	5616	D1
2633	B2	3678	C2	5618	B1
2634	B2	3679	C2	6600	D1
2635	B2	3680	A3	6605	A1
2636	B2	3681	A3	6620	C2
2637	A2	3682	C2	6630	B2
2639	A3	3683	A1	6631	A3
2640	B2	3684	C2	7600	C2
2641	B2	3685	B2	7603	C2
2642	C2	3686	A1	7604	B2
2643	C2	3687	C2	7605	C2
2645	B2	3688	A1	7606	C2
2646	A2	3689	A1	7607	C3
2647	B2	3690	B2	7610	C1
2649	B2	3691	B2	7611	C1
2650	A2	3693	B2	7612	D1
2652	B2	3695	A2	7615	A1
2653	B2	3697	C3	7616	A1
2654	B2	3698	B1	7617	D1
2655	A2	3699	C1	7619	D1
2656	A2	3700	B1	7624	D2
2658	D2	3701	C1	7625	C3
2661	C2	3702	B1	7626	C2
2669	D1	3703	B1	7627	C3
2676	D2	3704	C1	7628	D2
2677	C3	3705	C1	7629	D2
2682	A2	3706	C1	7636	C2
2690	B1	3708	C1	7638	A2
2696	D1	3716	C2	7639	A2
2701	B2	3719	D1	7640	C1
2702	B2	3724	D1		
2705	D1	3725	D1		
2708	A2	3729	D3		
2709	C1	3730	D2		
2710	A2	3731	C2		
3600	A2	3732	C2		
3601	A2	3733	C3		
3602	C1	3734	C3		
3603	A1	3735	C3		
3608	A1	3736	C3		
3609	D1	3737	D2		
3610	A2	3738	D2		
3611	A1	3739	D2		
3612	C2	3741	C3		
3613	A1	3742	C2		
3616	A2	3743	C3		
3617	A2	3744	C3		
3618	A2	3745	D2		
3619	A2	3746	C3		
3621	A2	3747	D2		
3622	A2	3748	D2		
3625	A1	3749	D2		
3629	D2	3750	D2		
3632	C1	3751	D2		
3638	A2	3752	D2		
3640	B2	3753	C2		
3641	B2	3754	D2		
3643	A1	3755	D2		
3644	A2	3756	C3		
3647	B1	3757	D2		
3648	A1	3758	D2		
3649	B1	3760	A2		
3650	A1	3769	C2		
3652	B2	3780	B1		
3653	B3	3781	C1		
3654	B3	3782	C1		
3655	B3	3783	A1		
3656	A2	3786	D1		
3657	A2	4600	D1		
3658	B3	4601	D1		
3660	B3	4602	A2		
3661	A1	4605	A2		
3663	A1	4610	B1		

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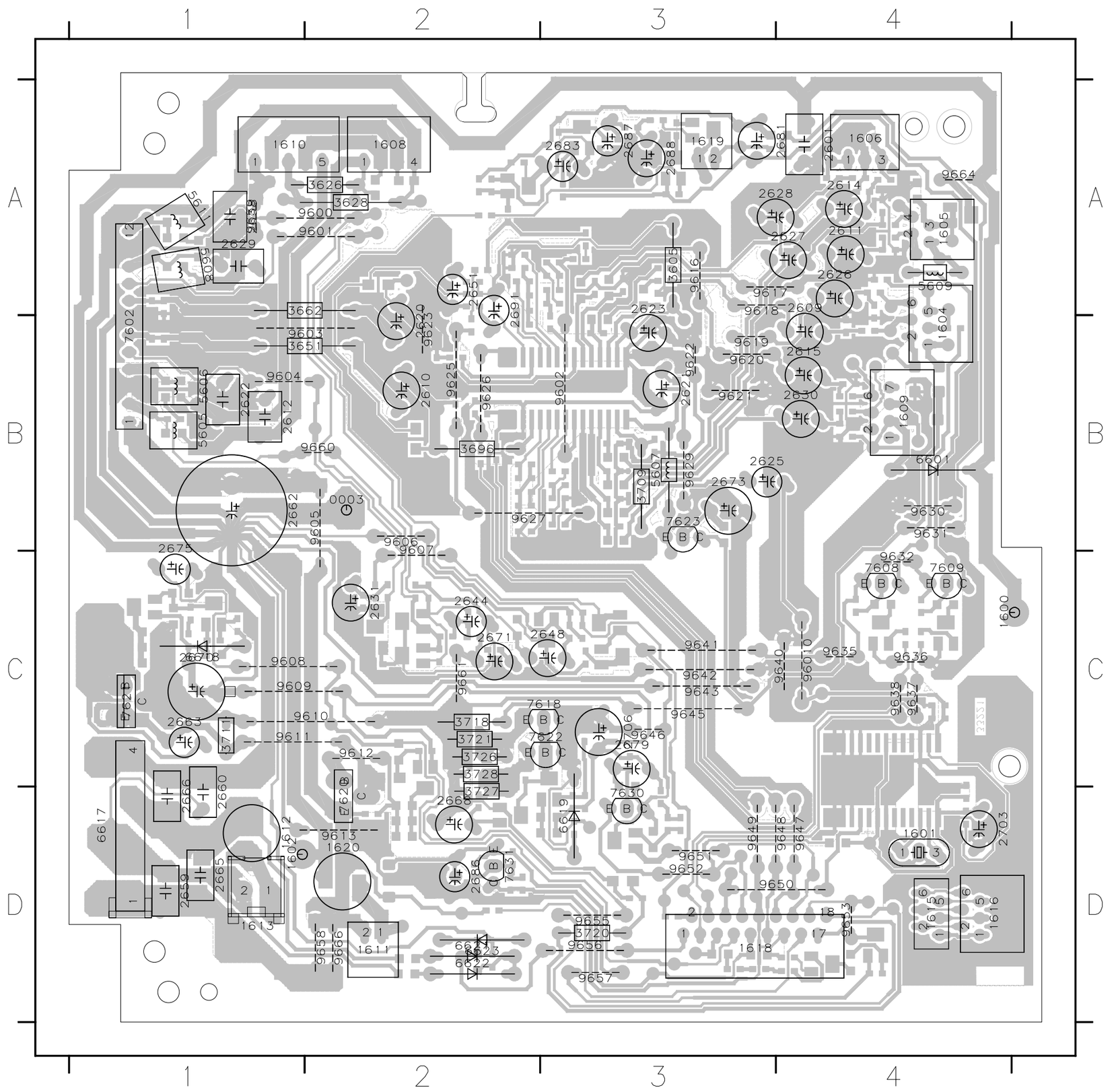
POWER BOARD - LAYOUT DIAGRAM
(COMPONENT SIDE VIEW)



0003	B2	6623	D2
1600	C4	7602	B1
1601	D4	7608	C4
1602	D1	7609	C4
1604	B4	7618	C3
1605	A4	7620	D2
1606	A4	7621	C1
1608	A2	7622	C3
1609	B4	7623	B3
1610	A1	7630	D3
1611	D2	7631	D2
1612	D1	9600	A2
1613	D1	9601	A2
1615	D4	96010	C4
1616	D4	9602	B3
1618	D3	9603	B2
1619	A3	9604	B1
1620	D2	9605	B2
2601	A4	9606	B2
2609	A4	9607	B2
2610	B2	9608	C1
2611	A4	9609	C1
2612	B1	9610	C2
2614	A4	9611	C1
2615	B4	9612	C2
2620	B2	9613	D2
2621	B3	9616	A3
2622	B1	9617	A3
2623	A3	9618	A3
2625	B3	9619	B3
2626	A4	9620	B3
2627	A4	9621	B3
2628	A3	9622	B3
2629	A1	9623	B2
2630	B4	9625	B2
2631	C2	9626	B2
2638	A1	9627	B2
2644	C2	9629	B3
2648	C3	9630	B4
2651	A2	9631	B4
2659	D1	9632	C4
2660	D1	9635	C4
2662	B1	9636	C4
2663	C1	9637	C4
2665	D1	9638	C4
2666	D1	9640	C4
2668	D2	9641	C3
2670	C1	9642	C3
2671	C2	9643	C3
2673	B3	9645	C3
2675	B1	9646	C3
2679	C3	9647	D4
2681	A4	9648	D4
2683	A3	9649	D3
2686	D2	9650	D4
2687	A3	9651	D3
2688	A3	9652	D3
2691	A2	9653	D4
2703	D4	9655	D3
2706	C3	9656	D3
3605	A3	9657	D3
3626	A2	9658	D2
3628	A2	9659	A1
3651	B2	9660	B2
3662	A2	9661	C2
3696	B2	9664	A4
3709	B3	9666	D2
3711	C1		
3718	C2		
3720	D3		
3721	C2		
3726	C2		
3727	D2		
3728	C2		
5605	B1		
5606	B1		
5607	B3		
5608	A1		
5609	A4		
5611	A1		
6601	B4		
6617	D1		
6618	C1		
6619	D3		
6621	D2		
6622	D2		

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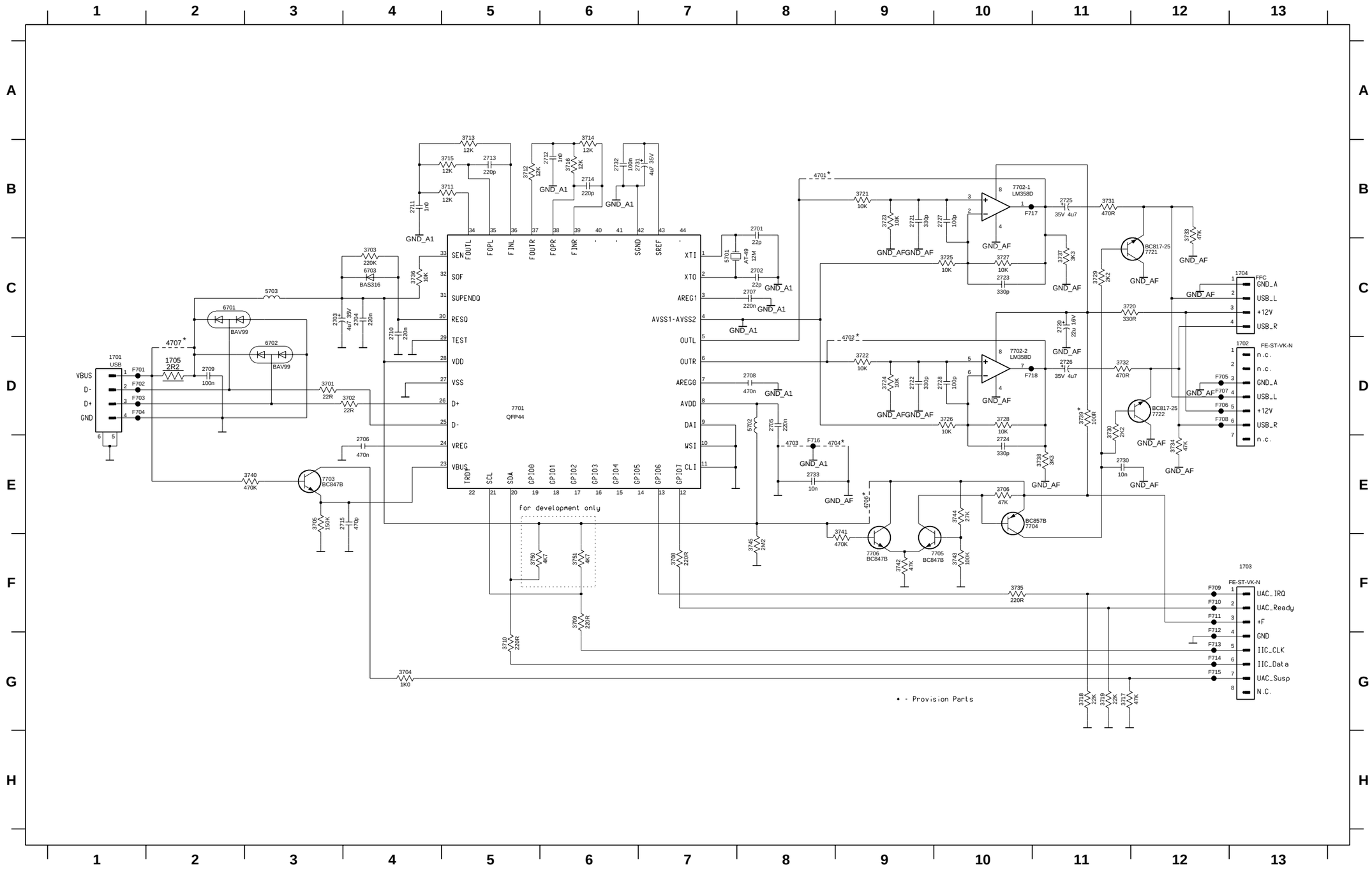
USB BOARD - CIRCUIT DIAGRAM



1701 D1
1702 D13
1703 F13
1704 C13
1705 D2
2701 B8
2702 C8
2703 C3
2704 C4
2705 D8
2706 E4
2707 C8
2708 D8
2709 D2
2710 C4
2711 B4
2712 B6
2713 B5
2714 B6
2715 E4
2720 C11
2721 B9
2722 D9
2723 C10
2724 E10
2725 B11
2726 D11
2727 B10
2728 D10
2730 E11
2731 B7
2732 B6
2733 E8
3701 D3
3702 D4
3703 C4
3704 G4
3705 E3
3706 E10
3708 F7
3709 F6
3710 G5
3711 B5
3712 B5
3713 A5
3714 A6
3715 B5
3716 B6
3717 G11
3718 G11
3719 G11
3720 C11
3721 B9
3722 D9
3723 B9
3724 D9
3725 C10
3726 D10
3727 C10
3728 D10
3729 C11
3730 D11
3731 B11
3732 D11
3733 B12
3734 E12
3735 F10
3736 C4
3737 C11
3738 E11
3739 D11
3740 E3
3741 E9
3742 F9
3743 F10
3744 E10
3745 F8
3750 F5
3751 F6
4701 B8
4702 D9
4703 E8
4704 E8
4706 E9
4707 D2
5701 C7
5702 D8
5703 C3
6701 C2
6702 D3
6703 C4
7701 D5
7702-1 B10
7702-2 D10
7703 E3
7704 E10
7705 F10
7706 F9
7721 C12
7722 D12
F701 D1
F702 D1
F703 D1
F704 D1
F705 D12
F706 D12
F707 D12
F708 D12
F709 F12
F710 F12
F711 F12
F712 F12
F713 G12
F714 G12
F715 G12
F716 E8
F717 B10
F718 D10

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USB BOARD - LAYOUT DIAGRAM

B3 B3 B1 B2 B2 1 B2 B2 A A 1 B2 2 B2 3 C2 3 C 1 A 1 A 1

3750 1 3751 1 3752 2 3753 3 3754 4 3755 7 3756 7 3757 0 3758 0 3759 2 3760 3 3761 1 3762 4 3763 4 3764 7 3765 7 3766 7 3767 2 3768 2 3769 2 3770 0 3771 2 3772 2

B2 B2 A2 A2 C2 C 1 B 1 1 A 1 A B2 A 1 B2 B2 C3 B3 B3 A3 A3 A3 B 1 1 1 1 B C B C 1 1 1 1 C A 1 1 1 1 A A B 1 1 B B 1 1 B 1 A3 B 1 B 1 C3

1705 1 1702 0 9 0 1 2 0 2 0 2 3 3 1 2 0 2 3 3 3 1 1 8 8 0 7 8 9 0 1 2 3 3 4 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8

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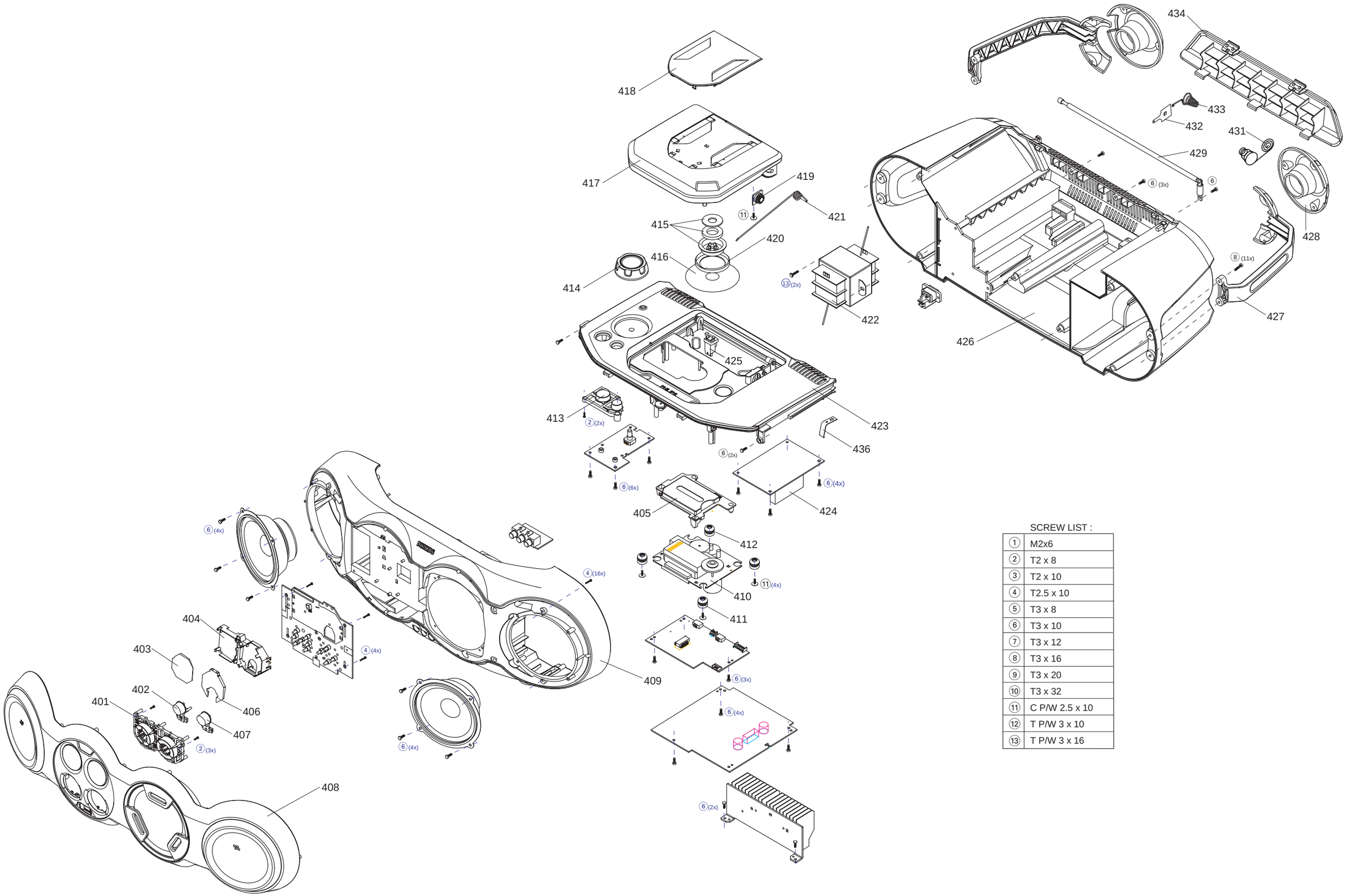
EXPLODED VIEW DIAGRAM - CABINET



SCREW LIST :

①	M2x6
②	T2 x 8
③	T2 x 10
④	T2.5 x 10
⑤	T3 x 8
⑥	T3 x 10
⑦	T3 x 12
⑧	T3 x 16
⑨	T3 x 20
⑩	T3 x 32
⑪	C P/W 2.5 x 10
⑫	T P/W 3 x 10
⑬	T P/W 3 x 16

MECHANICAL PARTSLIST - CABINET

401	3140 117 66681	BUTTON TREE PNT PRT
402	3140 117 66671	PLAY/PAUSE BUTTON PNT PRT
403	3140 114 49271	LIGHT GUIDE-LCD
404	3140 114 49231	BRACKET-LCD
405	4822 442 01713	COVER CD COMPATIBLE
406	3140 114 49261	LIGHT GUIDE-VU
407	3140 117 66661	WOOX BUTTON PRT
408	3140 117 68301	FRONT PANEL ASSY
409	3140 117 66561	FRONT CABINET ASSY
410	3103 309 05380	CD MCD2 ASSY
411	4822 529 10387	DAMPER - RUBBER (40 DEG)
412	4822 529 10386	DAMPER - RUBBER (30 DEG)
413	3140 117 66611	POWER-SOURCE BUTTON PNT PRT
414	3140 117 66711	VOLUME KNOB ASSY
415	4822 532 12798	RING PRESSURE
416	4822 535 60096	DISC
417	3140 117 68261	CD DOOR PRT
418	3140 117 66621	CD DOOR DETAIL PRT
419	4822 529 10322	DAMPER ASSY
420	4822 532 13153	RING (CD LID)
421	3140 111 22761	SPRING-CD (LONG)
422	4822 263 21206	P50 ADAPTOR
423	3140 118 68252	CD TRAY ASSY AZ2555
424	4822 256 90463	HOLDER FERRITE BAR
425	4822 276 13963	CD DOOR SWITCH
426	3140 117 66531	BACK CABINET ASSY
427	3140 117 67111	HANDLE PNT
428	3140 117 66741	BASS PORT CAP PNT
429	3140 118 71790	ROD ANTENNA EXTEND 660MM
431	4822 492 51733	SPRING
432	3140 111 21320	CONTACT PLATE
433	3140 111 22951	SPRING-COMPRESSION
434	3140 117 68141	BATTERY DOOR PNT AZ2555
436	3140 111 22971	START SPRING PLATE
	2422 070 98151	MAINSCORD EUR 1M5 BK B
	2422 070 98246	MAINSCORD UL 7A 1M5 DET 2P B (-/17)
	3139 228 61871	REMOTE CONTROL 19621005/01 PACKED
	3140 110 22391	CBLE USB-A/1500/USB-B

Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST - KEY BOARD

- MISCELLANEOUS -

1100	2422 025 10768	CONNECTOR 3P
1101	4822 267 31996	CONNECTOR 1P
1150	2422 026 05099	CONNECTOR PHONE H 1P
1151	4822 265 30735	CONNECTOR 5P
1400	4822 267 10958	CONNECTOR5P
1401	4822 265 11535	SOCKET FFC 8P
1402	4822 265 11207	SOCKET FFC 6P
1405	4822 265 11184	CONNECTOR
1406	4822 265 11207	SOCKET FFC 6P
1430	2422 128 02922	SWITCH-TACT
1431	2422 128 02922	SWITCH-TACT
1432	2422 128 02922	SWITCH-TACT
1433	2422 128 02922	SWITCH-TACT
1434	2422 128 02922	SWITCH-TACT
1435	2422 128 02922	SWITCH-TACT
1436	2422 128 02922	SWITCH-TACT
1437	2422 128 02922	SWITCH-TACT
1438	2422 128 02922	SWITCH-TACT
1439	2422 128 02922	SWITCH-TACT
1440	2422 128 02922	SWITCH-TACT
1441	2422 128 02922	SWITCH-TACT

- CAPACITORS -

2101	2238 586 59812	100nF +80-20% Y5V 50V
2150	5322 126 11578	1nF 10% X7R 50V
2151	5322 126 11578	1nF 10% X7R 50V
2300	4822 124 81286	47µF 20% 16V
2301	3198 016 31020	1nF NP0 25V
2302	2238 586 59812	100nF +80-20% Y5V 50V
2303	2238 586 59812	100nF +80-20% Y5V 50V
2400	2238 586 59812	100nF +80-20% Y5V 50V
2401	4822 124 23432	100µF 20% 10V
2402	5322 126 11583	10nF 10% X7R 50V
2403	2020 552 94427	100pF 5% NP0 50V
2404	2020 552 94427	100pF 5% NP0 50V
2405	2020 552 94427	100pF 5% NP0 50V
2406	2020 552 94427	100pF 5% NP0 50V
2407	2238 586 59812	100nF +80-20% Y5V 50V
2408	4822 124 23432	100µF 20% 10V
2409	2238 586 59812	100nF +80-20% Y5V 50V
2410	5322 126 11583	10nF 10% X7R 50V
2411	2020 552 94427	100pF 5% NP0 50V
2412	2020 552 94427	100pF 5% NP0 50V
2413	2020 552 94427	100pF 5% NP0 50V
2414	2020 552 94427	100pF 5% NP0 50V
2415	2020 552 94427	100pF 5% NP0 50V
2416	5322 126 11583	10nF 10% X7R 50V
2417	4822 126 13883	220PF 5% 50V
2418	2020 552 94427	100pF 5% NP0 50V
2419	2020 552 94427	100pF 5% NP0 50V
2420	2020 552 94427	100pF 5% NP0 50V
2421	5322 126 11583	10nF 10% X7R 50V
2422	4822 124 22651	1,0µF 20% 50V
2423	2238 586 59812	100nF +80-20% Y5V 50V
2425	4822 126 14225	56pF 5% NP0 50V
2426	4822 122 33752	15pF 5% NP0 50V
2427	4822 122 33752	15pF 5% NP0 50V
2428	5322 126 11583	10nF 10% X7R 50V
2429	4822 126 13881	470pF 5% 50V
2430	4822 126 13881	470pF 5% 50V
2431	4822 126 13881	470pF 5% 50V
2432	4822 126 13881	470pF 5% 50V
2433	4822 126 13881	470pF 5% 50V
2434	4822 126 13881	470pF 5% 50V
2435	5322 126 11583	10nF 10% X7R 50V
2436	2238 586 59812	100nF +80-20% Y5V 50V
2437	5322 126 11583	10nF 10% X7R 50V
2438	4822 124 12032	4,7µF 20% 50V
2439	2020 552 94427	100pF 5% NP0 50V
2440	2020 552 94427	100pF 5% NP0 50V
2441	4822 126 13881	470pF 5% 50V
2442	4822 126 13881	470pF 5% 50V
2443	2020 552 94427	100pF 5% NP0 50V
2444	4822 126 13881	470pF 5% 50V
2445	5322 126 11583	10nF 10% X7R 50V
2446	5322 126 11583	10nF 10% X7R 50V
2447	4822 126 14585	100nF 10% X7R 50V
2448	2238 586 59812	100nF +80-20% Y5V 50V
2449	2238 586 59812	100nF +80-20% Y5V 50V
2450	2238 586 59812	100nF +80-20% Y5V 50V
2451	4822 124 22651	1,0µF 20% 50V
2452	2238 586 59812	100nF +80-20% Y5V 50V
2453	2238 586 59812	100nF +80-20% Y5V 50V
2455	2238 586 59812	100nF +80-20% Y5V 50V
2457	2238 586 59812	100nF +80-20% Y5V 50V

- RESISTORS -

3150	4822 116 52219	330R 5% 0,5W
3151	4822 116 52219	330R 5% 0,5W
3152	4822 116 52219	330R 5% 0,5W
3153	4822 116 52219	330R 5% 0,5W
3154	4822 116 52226	560R 5% 0,5W
3155	4822 116 52226	560R 5% 0,5W
3300	4822 051 30221	220R 5% 0,062W
3302	4822 117 12864	82K 5% 0,6W
3303	4822 051 30681	680R 5% 0,062W
3304	4822 051 30103	10K 5% 0,062W

ELECTRICAL PARTSLIST - KEY BOARD

- RESISTORS -

3305	4822 117 12139	22R 5% 0,062W
3306	4822 051 30339	33R 5% 0,062W
3307	4822 051 30109	10R 5% 0,062W
3308	4822 051 30331	330R 5% 0,062W
3330	4822 051 30102	1K 5% 0,062W
3331	4822 051 30681	680R 5% 0,062W
3332	4822 051 30471	470R 5% 0,062W
3333	4822 051 30331	330R 5% 0,062W
3334	4822 051 30331	330R 5% 0,062W
3335	4822 051 30102	1K 5% 0,062W
3336	4822 051 30681	680R 5% 0,062W
3337	4822 051 30471	470R 5% 0,062W
3338	4822 051 30331	330R 5% 0,062W
3339	4822 051 30331	330R 5% 0,062W
3340	4822 051 30103	10K 5% 0,062W
3341	4822 051 30103	10K 5% 0,062W
3400	4822 051 30103	10K 5% 0,062W
3401	4822 051 30103	10K 5% 0,062W
3402	4822 051 30103	10K 5% 0,062W
3403	4822 051 30103	10K 5% 0,062W
3404	4822 051 30102	1K 5% 0,062W
3405	4822 051 30221	220R 5% 0,062W
3406	4822 051 30471	470R 5% 0,062W
3407	4822 051 30102	1K 5% 0,062W
3408	4822 051 30102	1K 5% 0,062W
3409	4822 051 30109	10R 5% 0,062W
3410	4822 117 12139	22R 5% 0,062W
3411	4822 051 30103	10K 5% 0,062W
3412	4822 051 30103	10K 5% 0,062W
3413	4822 051 30103	10K 5% 0,062W
3414	4822 051 30103	10K 5% 0,062W
3415	4822 051 30103	10K 5% 0,062W
3416	4822 051 30222	2,2K 5% 0,062W
3417	4822 051 30222	2,2K 5% 0,062W
3418	4822 051 30102	1K 5% 0,062W
3419	4822 051 30102	1K 5% 0,062W
3420	4822 051 30103	10K 5% 0,062W
3421	4822 051 30103	10K 5% 0,062W
3422	4822 051 30102	1K 5% 0,062W
3423	4822 051 30102	1K 5% 0,062W
3424	4822 051 30102	1K 5% 0,062W
3425	4822 051 30102	1K 5% 0,062W
3426	4822 051 30102	1K 5% 0,062W
3427	4822 051 30102	1K 5% 0,062W
3428	4822 051 30102	1K 5% 0,062W
3429	4822 051 30102	1K 5% 0,062W
3430	4822 117 12925	47K 1% 0,063W
3431	4822 051 30102	1K 5% 0,062W
3432	4822 051 30102	1K 5% 0,062W
3433	4822 051 30102	1K 5% 0,062W

- RESISTORS -

3434	4822 051 30102	1K 5% 0,062W
3435	4822 051 30101	100R 5% 0,062W
3436	4822 051 30471	470R 5% 0,062W
3437	4822 051 30471	470R 5% 0,062W
3438	4822 051 30472	4,7K 5% 0,062W
3439	4822 051 30102	1K 5% 0,062W
3440	4822 051 30471	470R 5% 0,062W
3442	4822 051 30471	470R 5% 0,062W
3443	4822 051 30103	10K 5% 0,062W
3444	4822 051 30102	1K 5% 0,062W
3445	4822 051 30103	10K 5% 0,062W
3446	4822 051 30223	22K 5% 0,062W
3447	4822 051 30103	10K 5% 0,062W
3448	4822 051 30103	10K 5% 0,062W
3449	4822 051 30103	10K 5% 0,062W
3450	4822 051 30102	1K 5% 0,062W
3451	4822 051 30102	1K 5% 0,062W
3452	4822 051 30102	1K 5% 0,062W
3453	4822 051 30102	1K 5% 0,062W
3454	4822 051 30102	1K 5% 0,062W
3455	4822 051 30102	1K 5% 0,062W
3456	4822 051 30102	1K 5% 0,062W
3457	4822 051 30102	1K 5% 0,062W
3458	4822 051 30102	1K 5% 0,062W
3459	4822 051 30471	470R 5% 0,062W
3460	4822 051 30102	1K 5% 0,062W
3461	4822 051 30102	1K 5% 0,062W
3462	4822 051 30102	1K 5% 0,062W
3463	4822 051 30223	22K 5% 0,062W
3464	4822 051 30102	1K 5% 0,062W
3465	4822 051 30223	22K 5% 0,062W
3466	4822 051 30102	1K 5% 0,062W
3468	4822 051 30471	470R 5% 0,062W
3469	4822 051 30102	1K 5% 0,062W
3470	4822 051 30102	1K 5% 0,062W
3471	4822 051 30102	1K 5% 0,062W
3472	4822 051 30102	1K 5% 0,062W
3473	4822 051 30102	1K 5% 0,062W
3474	4822 051 30102	1K 5% 0,062W
3475	4822 051 30102	1K 5% 0,062W
3476	4822 051 30472	4,7K 5% 0,062W
3477	4822 051 30154	150K 5% 0,062W
3478	4822 051 30472	4,7K 5% 0,062W
3479	4822 051 30102	1K 5% 0,062W
3480	4822 051 30474	470K 5% 0,062W
3481	4822 051 30154	150K 5% 0,062W
3482	4822 051 30471	470R 5% 0,062W
3483	4822 051 30272	2,7K 5% 0,062W
3484	4822 051 30272	2,7K 5% 0,062W
3485	5322 117 13039	220K 1% 0,063W

ELECTRICAL PARTSLIST - KEY BOARD

- RESISTORS -

3486	4822 051 30153	15K 5% 0,062W
3487	4822 051 30153	15K 5% 0,062W
3488	4822 051 30562	5,6K 5% 0,063W
3489	2322 704 65603	56K 1%
3490	4822 051 30102	1K 5% 0,062W
3491	4822 051 30471	470R 5% 0,062W
3492	4822 051 30562	5,6K 5% 0,063W
3493	4822 051 30102	1K 5% 0,062W
3494	4822 051 30471	470R 5% 0,062W
3495	4822 051 30102	1K 5% 0,062W
3496	4822 051 30102	1K 5% 0,062W
3497	4822 051 30102	1K 5% 0,062W
3498	4822 051 30102	1K 5% 0,062W
3499	4822 051 30472	4,7K 5% 0,062W
3501	4822 051 30102	1K 5% 0,062W
3502	4822 051 30102	1K 5% 0,062W
3503	4822 051 30153	15K 5% 0,062W
3504	4822 051 30153	15K 5% 0,062W
3505	4822 051 30152	1,5K 5% 0,062W
3507	4822 051 30682	6,8K 5% 0,062W
3509	4822 051 30103	10K 5% 0,062W
3510	4822 051 30223	22K 5% 0,062W
3511	4822 051 30223	22K 5% 0,062W
3513	4822 051 30102	1K 5% 0,062W
3600	4822 051 30221	220R 5% 0,062W
3603	4822 051 30681	680R 5% 0,062W
3605	4822 051 30221	220R 5% 0,062W
3608	4822 051 30331	330R 5% 0,062W
3610	4822 117 12139	22R 5% 0,062W
3682	4822 051 30471	470R 5% 0,062W
4330	4822 051 30008	0R JUMPER
4331	4822 051 30008	0R JUMPER
4332	4822 051 30008	0R JUMPER
4401	4822 051 30008	0R JUMPER
4403	4822 051 30008	0R JUMPER
4451	4822 051 30008	0R JUMPER
4453	4822 051 30008	0R JUMPER
4454	4822 051 30008	0R JUMPER
4455	4822 051 30008	0R JUMPER
4456	4822 051 30008	0R JUMPER
4457	4822 051 30008	0R JUMPER
4458	4822 051 30008	0R JUMPER
4459	4822 051 30008	0R JUMPER
4460	4822 051 30008	0R JUMPER
4461	4822 051 30008	0R JUMPER
4463	4822 051 30008	0R JUMPER
4464	4822 051 30008	0R JUMPER
4465	4822 051 30008	0R JUMPER
4466	4822 051 30008	0R JUMPER
4468	4822 051 30008	0R JUMPER

- RESISTORS -

4469	4822 051 30008	0R JUMPER
4470	4822 051 30008	0R JUMPER

- COILS & FILTERS -

5150	2422 549 44919	IND FXD SM 100MHZ 600R
5400	2422 549 43062	IND FXD SM 100MHZ 600R
5401	2422 549 44393	IND FXD SM 100MHZ 2,7K
5402	2422 549 43062	IND FXD SM 100MHZ 600R
5403	2422 549 43062	IND FXD SM 100MHZ 600R
5404	2422 549 43062	IND FXD SM 100MHZ 600R
5405	2422 549 43062	IND FXD SM 100MHZ 600R
5406	2422 549 44393	IND FXD SM 100MHZ 2,7K
5407	4822 157 11228	100µH LAN02TB101J 5%
5408	2422 549 44393	IND FXD SM 100MHZ 2,7K
5409	4822 157 11228	100µH LAN02TB101J 5%
5410	2422 540 98518	8MHZ CSTS*MG03
5411	2422 549 44393	IND FXD SM 100MHZ 2,7K
5500	3140 110 51881	METER VU

- DIODES -

6300	9322 172 75676	VS LTL-1CHKFK
6301	5322 130 34337	BAV99
6303	9322 172 75676	VS LTL-1CHKFK
6304	9322 172 75676	VS LTL-1CHKFK
6305	5322 130 34337	BAV99
6307	9322 172 75676	VS LTL-1CHKFK
6400	4822 130 11148	UDZ4,7B

- IC & TRANSISTORS -

7300	4822 130 42804	BC817-25
7301	4822 130 42804	BC817-25
7304	5322 130 60159	BC846B
7400	3140 110 51911	LCD PANEL
7401	3140 110 51831	TMP86CS25F
7402	9322 178 88685	NCP301LSN27
7404	5322 130 60159	BC846B
7405	9965 000 04931	M24C01-WMN6
7406	9322 185 95667	TSOP4836

Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST - TUNER BOARD

- MISCELLANEOUS -

1105	4822 267 10676	CONNECTOR 1P
1106	4822 526 10176	FERRITE BAR
1121	4822 267 10733	CONNECTOR CABLE/WIRE
1122	4822 267 10954	SOCKET FFC 5P

- CAPACITORS -

2101	4822 126 13692	47pF 1% NP0 63V
2103	5322 122 31647	1nF 10% X7R 63V
2104	5322 122 32531	100pF 5% NP0 50V
2106	2020 800 00191	CTRM 100V 3pF-11pF N450
2107	4822 121 51319	1µF 10% 63V
2120	4822 126 14507	18pF 5% 50V NP0
2124	2238 916 15641	22nF 10% X7R 25V
2125	2238 861 18561	560pF 1% NP0 50V
2126	4822 126 14241	330pF NP0 50V
2127	4822 126 13879	220nF +80-20% 16V
2128	4822 124 40248	10µF 20% 63V
2129	4822 124 41584	100µF 20% 10V
2130	3198 017 44740	470nF Y5V 10V
2131	3198 017 44740	470nF Y5V 10V
2132	3198 017 44740	470nF Y5V 10V
2133	4822 124 21913	1µF 20% 63V
2134	4822 126 13188	15nF 5% X7R 63V
2135	4822 126 13188	15nF 5% X7R 63V
2136	4822 126 13879	220nF +80-20% 16V
2137	4822 126 13879	220nF +80-20% 16V
2138	4822 124 22652	2,2µF 20% 50V
2139	4822 126 14236	15pF 5% 50V
2140	4822 126 13695	82pF 1% NP0 63V
2141	2238 586 59812	100nF +80-20% Y5V 50V
2144	3198 017 44740	470nF Y5V 10V
2145	4822 126 13883	220pF 5% 50V
2146	4822 122 33575	220pF 5% NP0 63V
2147	4822 126 13883	220pF 5% 50V
2148	4822 126 14238	2,2nF X7R 50V
2150	4822 126 14585	100nF 10% X7R 50V
2152	4822 126 14549	33nF 16V X7R
2153	4822 126 13486	15pF 2% NP0 63V
2155	2020 800 00191	CTRM 100V 3pF-11pF N450
2159	2238 861 18339	33pF 1% NP0 50V
2164	3198 017 44740	470nF Y5V 10V
2165	2238 586 59812	100nF +80-20% Y5V 50V
2166	5322 122 31647	1nF 10% X7R 63V
2167	4822 122 33926	12pF 50V
2186	4822 124 40196	220µF 20% 16V
2187	4822 122 33177	10nF 20% X7R 50V

- CAPACITORS -

2188	4822 122 33177	10nF 20% X7R 50V
2189	4822 126 13879	220nF +80-20% 16V
2190	4822 124 81151	22µF 50V
2191	4822 124 81151	22µF 50V
2192	5322 122 31647	1nF 10% X7R 63V
2193	5322 122 31647	1nF 10% X7R 63V
2194	5322 122 31647	1nF 10% X7R 63V
2195	4822 124 81151	22µF 50V
2196	4822 122 33177	10nF 20% X7R 50V
2197	4822 122 33177	10nF 20% X7R 50V

- RESISTORS -

3101	4822 051 30333	33K 5% 0,062W
3102	4822 117 10837	100K 1% 0,1W
3103	4822 051 20822	8,2K 5% 0,1W
3104	4822 117 13577	330R 1% 1,25W
3105	4822 117 11503	220R 1% 0,1W
3132	4822 051 30479	47R 5% 0,062W
3134	4822 051 20223	22K 5% 0,1W
3141	4822 051 30563	56K 5% 0,062W
3142	4822 100 12159	100K 30%
3145	4822 117 11449	2,2K 5% 0,1W
3152	4822 051 30471	470R 5% 0,062W
3153	4822 051 30471	470R 5% 0,062W
3155	4822 051 30479	47R 5% 0,062W
3156	4822 117 10837	100K 1% 0,1W
3157	4822 117 10837	100K 1% 0,1W
3158	4822 051 30471	470R 5% 0,062W
3159	4822 051 30471	470R 5% 0,062W
3160	4822 051 30471	470R 5% 0,062W
3161	4822 051 20223	22K 5% 0,1W
3166	4822 051 30479	47R 5% 0,062W
3167	4822 051 30479	47R 5% 0,062W
3169	4822 051 20154	150K 5% 0,1W
3170	4822 117 10837	100K 1% 0,1W
3186	4822 117 11448	180R 1% 0,1W
3187	4822 051 10102	1K 2% 0,25W
3188	4822 117 11449	2,2K 5% 0,1W
3189	4822 051 20223	22K 5% 0,1W
3190	4822 117 10833	10K 1% 0,1W
3191	4822 051 30472	4,7K 5% 0,062W
3192	4822 051 20105	1M 5% 0,1W
3193	4822 117 11449	2,2K 5% 0,1W
3194	4822 117 10837	100K 1% 0,1W
3195	4822 051 30474	470K 5% 0,062W
3196	4822 117 10833	10K 1% 0,1W
4104	4822 051 30008	0R JUMPER

ELECTRICAL PARTSLIST - TUNER BOARD

- RESISTORS -

4105	4822 051 30008	0R JUMPER
4107	4822 051 30008	0R JUMPER
4108	4822 051 30008	0R JUMPER
4110	4822 051 30008	0R JUMPER

- COILS & FILTERS -

5104	2422 536 00364	IND FXD ANT FM065 190μH 5%
5109	4822 242 70665	SFE10,7MS3-A
5110	4822 242 70665	SFE10,7MS3-A
5111	2422 549 44023	IND VAR 7MM 7PY 450KHZ
5112	4822 157 70302	F7MCS-12216N
5114	4822 157 70302	F7MCS-12216N
5119	4822 157 11443	2,4μH 10,7MHZ
5121	4822 242 10261	T6252F00 (75KHZ)
5123	2422 549 44108	IND VAR 7MM 7PY 796KHZ
5130	4822 157 11843	MD7B-01F
5131	4822 157 11843	MD7B-01F

- DIODES -

6103	5322 130 34337	BAV99
6105	4822 130 83075	HN1V02H-B
6130	4822 130 82833	1SV228
6131	4822 130 82833	1SV228
6181	5322 130 34337	BAV99
6182	4822 130 83649	1SS355
6183	9340 386 90115	BZX284-C11

- IC & TRANSISTORS -

7101	9351 740 80557	TEA5757H/V1
7102	4822 130 42131	BF550
7111	5322 130 42755	BC847C
7180	4822 130 60373	BC856B
7181	5322 130 42755	BC847C
7182	5322 130 42755	BC847C
7183	5322 130 42755	BC847C

Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST - CD99 BOARD

- MISCELLANEOUS -

1002	3103 308 67031	MP3CD2002 ROM TXT 5V-IF
1800	4822 267 11028	SOCKER FFC H 16P
1801	4822 267 10565	CONNECTOR SOCKET 4P
1820	2422 025 16836	SOCKER FFC H 19P
1821	2422 025 12488	SOCKER FFC H 2P
1823	4822 265 11207	CONNECTOR SOCKET 6P
1824	4822 265 11207	CONNECTOR SOCKET 6P
8001	3103 308 92680	SOCKER FFC H 19P
8002	3103 308 93040	SOCKET FFC 16P

- CAPACITORS -

2814	5322 126 11579	3,3nF 10% X7R 63V
2815	4822 122 33753	150pF 5% NP0 50V
2816	2238 916 15641	22nF 10% X7R 25V
2817	4822 124 40769	4,7µF 20% 100V
2818	3198 017 34730	47nF X7R 16V
2821	2238 586 59812	100nF +80-20% Y5V 50V
2822	2238 916 11552	1,5nF 5% NP0 25V
2823	4822 124 42383	220µF 20% 4V
2825	2238 916 11552	1,5nF 5% NP0 25V
2826	3198 017 34730	47nF X7R 16V
2827	5322 126 11578	1nF 10% X7R 50V
2828	4822 126 11669	27pF
2829	3198 017 34730	47nF X7R 16V
2830	4822 124 81286	47µF 20% 16V
2831	4822 124 81286	47µF 20% 16V
2832	4822 126 14506	270pF 5% 50V NP0
2833	4822 126 14238	2,2nF X7R 50V
2834	4822 126 14506	270pF 5% 50V NP0
2835	4822 126 14247	1,5nF X7R 50V
2836	4822 124 40433	47µF 20% 25V
2837	3198 017 34730	47nF X7R 16V
2838	4822 126 13879	220nF +80-20% 16V
2839	2238 586 59812	100nF +80-20% Y5V 50V
2840	4822 124 81286	47µF 20% 16V
2841	4822 126 13879	220nF +80-20% 16V
2843	2020 552 94427	100pF 5% NP0 50V
2844	4822 126 13883	220pF 5% 50V
2845	4822 126 13883	220pF 5% 50V
2846	4822 124 21732	10µF 20% 25V
2847	4822 126 13879	220nF +80-20% 16V
2848	2020 552 94427	100pF 5% NP0 50V
2849	4822 126 13883	220pF 5% 50V
2850	4822 126 13883	220pF 5% 50V
2851	4822 124 11947	10µF 20% 16V
2853	5322 126 11583	10nF 10% X7R 50V

- CAPACITORS -

2854	4822 124 23052	100µF 20% 16V
2855	4822 124 11912	220µF 20% 6,3V
2860	4822 126 14508	180pF 5% 50V NP0
2861	4822 126 14241	330pF NP0 50V
2862	3198 017 34730	47nF X7R 16V
2863	4822 122 33753	150pF 5% NP0 50V
2864	4822 122 33753	150pF 5% NP0 50V
2865	4822 122 33753	150pF 5% NP0 50V
2866	4822 122 33753	150pF 5% NP0 50V
2869	3198 017 34730	47nF X7R 16V
2870	4822 126 13883	220pF 5% 50V
2871	4822 126 13883	220pF 5% 50V
2872	4822 126 13883	220pF 5% 50V
2873	4822 126 13883	220pF 5% 50V
2874	4822 126 13883	220pF 5% 50V
2875	4822 126 13883	220pF 5% 50V
2876	4822 124 40196	220µF 20% 16V
2877	4822 124 40433	47µF 20% 25V
2878	2238 586 59812	100nF +80-20% Y5V 50V
2879	5322 126 11578	1nF 10% X7R 50V
2880	2222 867 15339	33pF 5% NP0 50V
2881	4822 126 14249	560pF 10% X7R 50V
2882	4822 126 14226	82pF 5% NP0 50V
2883	3198 017 44740	470nF Y5V 10V
2884	3198 017 44740	470nF Y5V 10V

- RESISTORS -

3801	4822 051 30223	22K 5% 0,062W
3802	4822 051 30223	22K 5% 0,062W
3803	4822 051 30273	27K 5% 0,062W
3804	4822 051 30273	27K 5% 0,062W
3805	4822 051 30273	27K 5% 0,062W
3806	4822 051 30273	27K 5% 0,062W
3807	4822 051 30103	10K 5% 0,062W
3808	4822 051 30103	10K 5% 0,062W
3809	4822 051 30103	10K 5% 0,062W
3810	4822 051 30103	10K 5% 0,062W
3811	4822 051 30103	10K 5% 0,062W
3812	4822 051 30103	10K 5% 0,062W
3813	4822 051 30222	2,2K 5% 0,062W
3814	4822 051 30222	2,2K 5% 0,062W
3815	4822 051 30222	2,2K 5% 0,062W
3816	4822 051 30222	2,2K 5% 0,062W
3817	4822 051 30479	47R 5% 0,062W
3818	4822 051 30479	47R 5% 0,062W
3819	4822 051 30479	47R 5% 0,062W
3820	4822 052 10478	4,7R 5% 0,33W

ELECTRICAL PARTSLIST - CD99 BOARD

- RESISTORS -

3821	4822 117 12917	1R 5% 0,062W
3822	4822 051 30103	10K 5% 0,062W
3823	4822 051 30102	1K 5% 0,062W
3824	4822 051 20474	470K 5% 0,1W
3825	5322 117 13029	47K 1% 0,063W
3826	4822 117 12891	220K 1%
3827	5322 117 13056	8,2K 1% 0,063W
3828	5322 117 13052	2,7K 1% 0,063W
3829	4822 051 30121	120R 5% 0,062W
3830	4822 117 11373	100R 1%
3831	4822 051 30471	470R 5% 0,062W
3832	4822 051 30471	470R 5% 0,062W
3833	4822 051 30121	120R 5% 0,062W
3834	4822 051 30472	4,7K 5% 0,062W
3836	4822 116 40227	4,6R 25% 12V
3837	4822 051 30471	470R 5% 0,062W
3839	4822 051 30471	470R 5% 0,062W
3840	4822 051 30223	22K 5% 0,062W
3842	4822 051 30102	1K 5% 0,062W
3843	4822 051 30102	1K 5% 0,062W
3844	4822 051 30101	100R 5% 0,062W
3845	4822 051 30471	470R 5% 0,062W
3846	4822 051 30472	4,7K 5% 0,062W
3847	4822 117 10834	47K 1% 0,1W
3848	4822 051 30333	33K 5% 0,062W
3849	4822 051 30471	470R 5% 0,062W
3850	4822 051 30472	4,7K 5% 0,062W
3851	4822 117 10834	47K 1% 0,1W
3852	4822 051 30333	33K 5% 0,062W
3853	4822 117 12903	1,8K 1% 0,063W
3854	4822 051 30682	6,8K 5% 0,062W
3856	4822 117 12891	220K 1%
3858	4822 051 30682	6,8K 5% 0,062W
3859	4822 117 13632	100K 1% 0,62W
3861	4822 117 13632	100K 1% 0,62W
3862	4822 051 30102	1K 5% 0,062W
3863	4822 052 10338	3,3R 5% 0,33W
3864	4822 051 30223	22K 5% 0,062W
3865	4822 051 30101	100R 5% 0,062W
3866	4822 117 13608	4,7R 5% 0,0016W
3867	4822 051 30223	22K 5% 0,062W
3868	4822 051 30103	10K 5% 0,062W
3869	4822 051 30103	10K 5% 0,062W
3871	4822 051 30101	100R 5% 0,062W
3872	4822 051 30101	100R 5% 0,062W
3873	4822 051 30223	22K 5% 0,062W
3874	4822 051 30223	22K 5% 0,062W
3875	4822 051 30103	10K 5% 0,062W
3876	4822 051 30103	10K 5% 0,062W
3878	4822 051 30471	470R 5% 0,062W

- RESISTORS -

3879	4822 051 30223	22K 5% 0,062W
3880	4822 051 30339	33R 5% 0,062W
3881	4822 051 30151	150R 5% 0,062W
3882	4822 051 10102	1K 2% 0,25W
3883	4822 051 30102	1K 5% 0,062W
3884	4822 051 30102	1K 5% 0,062W
3888	4822 051 30103	10K 5% 0,062W
3889	4822 051 30471	470R 5% 0,062W
3890	4822 051 30471	470R 5% 0,062W
3891	4822 051 30102	1K 5% 0,062W
3892	4822 051 30102	1K 5% 0,062W
3893	4822 051 30471	470R 5% 0,062W
3894	4822 117 12891	220K 1%
3895	4822 051 30273	27K 5% 0,062W
3896	4822 051 30101	100R 5% 0,062W
3897	4822 051 30333	33K 5% 0,062W
3898	4822 051 30181	180R 5% 0,062W
3899	4822 051 30272	2,7K 5% 0,062W
3901	4822 051 30561	560R 5% 0,062W
3902	4822 117 12968	820R 5% 0,62W
3903	4822 051 30332	3,3K 5% 0,062W
3904	4822 051 30332	3,3K 5% 0,062W
3905	4822 051 30471	470R 5% 0,062W
3906	4822 051 30471	470R 5% 0,062W
3907	4822 051 30391	390R 5% 0,062W
3908	4822 051 30222	2,2K 5% 0,062W
3909	4822 117 13632	100K 1% 3 0,62W
3910	4822 051 30471	470R 5% 0,062W
3916	4822 051 30471	470R 5% 0,062W
3917	4822 117 13608	4,7R 5% 0,0016W
4801	4822 051 20008	0R JUMPER(0805)
4802	4822 051 20008	0R JUMPER(0805)
4803	4822 051 20008	0R JUMPER(0805)
4805	4822 051 20008	0R JUMPER(0805)
4808	4822 051 20008	0R JUMPER(0805)
4809	4822 051 20008	0R JUMPER(0805)
4811	4822 051 20008	0R JUMPER(0805)
4817	4822 051 30008	0R JUMPER
4818	4822 051 20008	0R JUMPER(0805)
4824	4822 051 20008	0R JUMPER(0805)
4827	4822 051 20008	0R JUMPER(0805)
4830	4822 051 20008	0R JUMPER(0805)
4832	4822 051 20008	0R JUMPER(0805)
4834	4822 051 20008	0R JUMPER(0805)
4836	4822 051 20008	0R JUMPER(0805)
4840	4822 051 20008	0R JUMPER(0805)
4841	4822 051 20008	0R JUMPER(0805)
4842	4822 051 20008	0R JUMPER(0805)
4845	4822 051 30008	0R JUMPER

ELECTRICAL PARTSLIST - CD99 BOARD

- COILS & FILTERS -

1810	2422 540 98519	8MHZ467 CSTS*MG03 A
5001	2422 549 44607	EMI100MHZ600RR

- DIODES -

6877	9322 129 34685	BZM55-C3V9

- IC & TRANSISTORS -

7800	9352 684 20557	SAA7325H/T/M2B
7808	4822 209 32852	TDA7073A/N2
7809	4822 209 32852	TDA7073A/N2
7810	4822 209 33165	TDA1308T/N1
7811	5322 209 82941	LM358D
7874	5322 130 60159	BC846B
7875	5322 130 60159	BC846B
7876	5322 130 60159	BC846B
7877	5322 130 60159	BC846B
7878	5322 130 60159	BC846B
7879	5322 130 60123	BC807-40

Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST - POWER BOARD

- MISCELLANEOUS -

1604	4822 265 11207	SOCKET FFC 6P
1605	4822 265 11183	SOCKET FFC 4P
1609	4822 267 10956	SOCKET FFC 7P
1612	4822 253 10126	FUSE 4,0A
1613	2422 025 16043	CONNECTOR H 2P
1615	4822 267 10731	06FE-BT-VK-N
1616	4822 265 11207	CONNECTOR SOCKET 6P
1618	4822 265 11184	SOCKET FFC 18P
1620	4822 253 10126	FUSE 4,0A
1904	8240 009 37971	SOCKET CINCH H 3P

- CAPACITORS -

2601	5322 121 42386	100nF 5% 63V
2602	5322 126 11583	10nF 10% X7R 50V
2603	5322 126 11583	10nF 10% X7R 50V
2604	2238 586 59812	100nF +80-20% Y5V 50V
2605	2238 586 59812	100nF +80-20% Y5V 50V
2606	2238 586 59812	100nF +80-20% Y5V 50V
2607	2238 586 59812	100nF +80-20% Y5V 50V
2608	2238 586 59812	100nF +80-20% Y5V 50V
2609	4822 124 41407	0,47µF 20% 63V
2610	4822 124 21913	1µF 20% 63V
2611	4822 124 41407	0,47µF 20% 63V
2612	4822 121 42408	220nF 5% 63V
2613	3198 016 31020	1nF NP0 25V
2614	4822 124 41407	0,47µF 20% 63V
2615	4822 124 41407	0,47µF 20% 63V
2616	4822 126 13881	470pF 5% 50V
2617	4822 126 13881	470pF 5% 50V
2618	4822 126 13881	470pF 5% 50V
2619	4822 126 13881	470pF 5% 50V
2620	4822 124 21913	1µF 20% 63V
2621	4822 124 81151	22µF 50V
2622	4822 121 42408	220nF 5% 63V
2623	4822 124 81151	22µF 50V
2624	3198 016 31020	1nF NP0 25V
2626	4822 124 41407	0,47µF 20% 63V
2627	4822 124 41407	0,47µF 20% 63V
2628	4822 124 41407	0,47µF 20% 63V
2629	4822 121 42408	220nF 5% 63V
2630	4822 124 41407	0,47µF 20% 63V
2631	4822 124 21913	1µF 20% 63V
2632	4822 126 13881	470pF 5% 50V
2633	4822 126 13881	470pF 5% 50V
2634	4822 126 13881	470pF 5% 50V
2635	4822 126 13881	470pF 5% 50V
2636	4822 126 13193	4,7nF 10% X7R 63V

- CAPACITORS -

2637	4822 126 13193	4,7nF 10% X7R 63V
2638	4822 121 42408	220nF 5% 63V
2639	4822 126 13751	47nF 10% X7R 63V
2640	2238 586 59812	100nF +80-20% Y5V 50V
2641	2238 586 59812	100nF +80-20% Y5V 50V
2642	5322 126 11583	10nF 10% X7R 50V
2643	5322 126 11583	10nF 10% X7R 50V
2644	4822 124 40248	10µF 20% 63V
2645	2238 586 59812	100nF +80-20% Y5V 50V
2646	2238 586 59812	100nF +80-20% Y5V 50V
2647	3198 016 31020	1nF NP0 25V
2648	4822 124 40433	47µF 20% 25V
2649	2238 586 59812	100nF +80-20% Y5V 50V
2650	4822 126 13751	47nF 10% X7R 63V
2651	4822 124 22726	4,7µF 35V
2652	3198 016 31020	1nF NP0 25V
2653	2020 552 94427	100pF 5% NP0 50V
2654	2020 552 94427	100pF 5% NP0 50V
2655	2238 586 59812	100nF +80-20% Y5V 50V
2656	3198 016 31020	1nF NP0 25V
2658	2238 586 59812	100nF +80-20% Y5V 50V
2659	5322 121 42386	100nF 5% 63V
2660	5322 121 42386	100nF 5% 63V
2661	2238 586 59812	100nF +80-20% Y5V 50V
2662	4822 124 12012	4700µF 20% 25V
2663	4822 124 22652	2,2µF 20% 50V
2665	5322 121 42386	100nF 5% 63V
2666	5322 121 42386	100nF 5% 63V
2668	4822 124 40433	47µF 20% 25V
2669	2238 586 59812	100nF +80-20% Y5V 50V
2670	4822 124 80791	470µF 16V 20%
2671	4822 124 40248	10µF 20% 63V
2673	4822 124 41584	100µF 20% 10V
2675	4822 124 22652	2,2µF 20% 50V
2676	3198 017 34730	47nF X7R 16V
2677	3198 016 31020	1nF NP0 25V
2679	4822 124 81151	22µF 50V
2681	4822 124 41584	100µF 20% 10V
2682	2238 586 59812	100nF +80-20% Y5V 50V
2683	4822 124 12032	4,7µF 20% 50V
2686	4822 124 40248	10µF 20% 63V
2687	4822 124 22651	1,0µF 20% 50V
2688	4822 124 40746	0,22µF 20% 63V
2690	3198 016 31020	1nF NP0 25V
2691	5322 124 41948	470nF+80-20% 50V
2696	2238 916 15641	22nF 10% X7R 25V
2701	2238 586 59812	100nF +80-20% Y5V 50V
2702	2238 586 59812	100nF +80-20% Y5V 50V
2706	4822 124 40196	220µF 20% 16V
2708	2238 586 59812	100nF +80-20% Y5V 50V

ELECTRICAL PARTSLIST - POWER BOARD

- CAPACITORS -

2710	2238 586 59812	100nF +80-20% Y5V 50V

- RESISTORS -

3600	4822 051 30332	3,3K 5% 0,062W
3601	4822 051 30123	12K 5% 0,062W
3603	4822 051 30684	680K 5% 0,062W
3605	4822 116 52298	680K 5% 0,5W
3608	4822 051 30392	3,9K 5% 0,063W
3610	4822 051 30103	10K 5% 0,062W
3611	4822 051 30153	15K 5% 0,062W
3612	4822 051 30472	4,7K 5% 0,062W
3613	4822 117 11503	220R 1% 0,1W
3616	4822 117 13632	100K 1% 0,62W
3617	4822 117 12891	220K 1%
3619	4822 051 30153	15K 5% 0,062W
3621	4822 117 13632	100K 1% 0,62W
3622	4822 051 30562	5,6K 5% 0,063W
3625	4822 051 30103	10K 5% 0,062W
3626	4822 116 52213	180R 5% 0,5W
3628	4822 116 52213	180R 5% 0,5W
3629	4822 117 12925	47K 1% 0,063W
3638	4822 051 30222	2,2K 5% 0,062W
3640	4822 051 30222	2,2K 5% 0,062W
3641	4822 051 30273	27K 5% 0,062W
3643	4822 051 30682	6,8K 5% 0,062W
3644	4822 051 30273	27K 5% 0,062W
3647	4822 051 30682	6,8K 5% 0,062W
3648	4822 051 30223	22K 5% 0,062W
3649	4822 051 30223	22K 5% 0,062W
3650	4822 051 20472	4,7K 5% 0,1W
3651	4822 116 83961	6,8K 5%
3652	4822 051 10102	1K 2% 0,25W
3653	4822 051 30103	10K 5% 0,062W
3654	4822 051 20228	2,2R 5% 0,1W
3655	4822 051 30272	2,7K 5% 0,062W
3656	4822 051 20472	4,7K 5% 0,1W
3657	4822 117 10833	10K 1% 0,1W
3658	4822 117 10833	10K 1% 0,1W
3660	4822 051 20228	2,2R 5% 0,1W
3661	4822 051 30331	330R 5% 0,062W
3662	4822 116 83961	6,8K 5%
3663	4822 051 30331	330R 5% 0,062W
3664	4822 051 30272	2,7K 5% 0,062W
3665	4822 051 20472	4,7K 5% 0,1W
3666	4822 051 30393	39K 5% 0,062W
3667	4822 051 30393	39K 5% 0,062W
3668	4822 051 10102	1K 2% 0,25W
3669	4822 051 20472	4,7K 5% 0,1W

- RESISTORS -

3670	4822 051 30682	6,8K 5% 0,062W
3671	4822 117 12925	47K 1% 0,063W
3672	4822 117 10833	10K 1% 0,1W
3673	4822 051 20228	2,2R 5% 0,1W
3674	4822 051 10102	1K 2% 0,25W
3675	4822 117 10833	10K 1% 0,1W
3676	4822 117 13632	100K 1% 0,62W
3677	4822 051 30223	22K 5% 0,062W
3678	4822 051 30223	22K 5% 0,062W
3679	4822 117 12925	47K 1% 0,063W
3680	4822 117 10833	10K 1% 0,1W
3681	4822 051 20228	2,2R 5% 0,1W
3682	4822 051 30102	1K 5% 0,062W
3683	4822 051 30472	4,7K 5% 0,062W
3684	4822 051 20391	390R 5% 0,1W
3685	4822 051 30471	470R 5% 0,062W
3686	4822 051 30472	4,7K 5% 0,062W
3687	4822 051 30472	4,7K 5% 0,062W
3688	4822 051 30393	39K 5% 0,062W
3689	4822 051 30393	39K 5% 0,062W
3690	4822 051 30471	470R 5% 0,062W
3691	4822 051 30471	470R 5% 0,062W
3693	4822 051 30272	2,7K 5% 0,062W
3695	4822 051 30272	2,7K 5% 0,062W
3696	4822 116 83883	470R 5% 0,5W
3697	4822 117 12925	47K 1% 0,063W
3698	4822 051 30682	6,8K 5% 0,062W
3699	4822 117 12925	47K 1% 0,063W
3700	4822 051 30682	6,8K 5% 0,062W
3701	4822 117 12925	47K 1% 0,063W
3702	4822 051 30223	22K 5% 0,062W
3703	4822 051 30223	22K 5% 0,062W
3704	4822 051 10102	1K 2% 0,25W
3705	4822 051 10102	1K 2% 0,25W
3706	4822 051 30223	22K 5% 0,062W
3708	4822 051 30223	22K 5% 0,062W
3716	4822 051 30223	22K 5% 0,062W
3718	4822 116 83883	470R 5% 0,5W
3719	4822 117 12925	47K 1% 0,063W
3720	4822 116 52176	10R 5% 0,5W
3721	4822 050 24708	4,7R 1% 0,6W
3724	4822 051 10102	1K 2% 0,25W
3725	4822 051 20472	4,7K 5% 0,1W
3726	4822 050 24708	4,7R 1% 0,6W
3727	4822 050 24708	4,7R 1% 0,6W
3728	4822 050 24708	4,7R 1% 0,6W
3729	4822 117 12925	47K 1% 0,063W
3730	4822 051 30222	2,2K 5% 0,062W
3731	4822 051 30152	1,5K5% 0,062W
3732	5322 117 13049	470R 1% 0,063W

ELECTRICAL PARTSLIST - POWER BOARD

- RESISTORS -

3733	4822 051 10102	1K 2% 0,25W
3734	4822 051 10102	1K 2% 0,25W
3735	4822 051 10102	1K 2% 0,25W
3736	4822 117 10834	47K 1% 0,1W
3737	4822 117 11449	2,2K 5% 0,1W
3738	4822 117 11449	2,2K 5% 0,1W
3739	4822 117 11449	2,2K 5% 0,1W
3741	4822 117 13632	100K 1% 0,62W
3742	4822 051 20472	4,7K 5% 0,1W
3743	4822 117 13577	330R 1% 1,25W
3744	4822 051 30331	330R 5% 0,062W
3745	4822 051 10102	1K 2% 0,25W
3746	4822 117 13632	100K 1% 0,62W
3747	4822 051 20472	4,7K 5% 0,1W
3748	4822 051 20472	4,7K 5% 0,1W
3749	5322 117 13059	560R 1% 0,063W
3750	5322 117 13056	8,2K 1% 0,063W
3751	4822 117 11454	820R 1% 0,1W
3752	4822 117 11454	820R 1% 0,1W
3753	4822 117 12925	47K 1% 0,063W
3754	4822 117 12903	1,8K 1% 0,063W
3755	4822 051 30272	2,7K 5% 0,062W
3756	4822 051 10102	1K 2% 0,25W
3757	4822 051 30273	27K 5% 0,062W
3758	4822 051 30123	12K 5% 0,062W
3760	4822 051 30472	4,7K 5% 0,062W
3769	4822 051 30103	10K 5% 0,062W
3780	4822 117 10361	680R1% 0,1W
3781	4822 117 11139	1,5K 1% 0,1W
3782	4822 051 30562	5,6K 5% 0,063W
3783	4822 051 30103	10K 5%0,062W
3786	4822 117 12925	47K 1% 0,063W
4600	4822 051 30008	0R00 JUMPER
4601	4822 051 30008	0R00 JUMPER
4602	4822 051 30008	0R00 JUMPER
4605	4822 051 30008	0R00 JUMPER
4610	4822 051 20008	0R JUMPER(0805)
4653	4822 051 30008	0R00 JUMPER
4663	4822 051 30008	0R00 JUMPER
4665	4822 051 20008	0R JUMPER(0805)
4682	4822 051 30008	0R00 JUMPER
4686	4822 051 30008	0R00 JUMPER
4691	4822 051 30008	0R00 JUMPER
4692	4822 051 30008	0R00 JUMPER
4693	4822 051 30008	0R00 JUMPER
4698	4822 051 20008	0R JUMPER(0805)
4880	4822 051 20008	0R JUMPER(0805)

- COILS & FILTERS -

5601	2422 549 43062	EMI 100MHZ 600R
5602	2422 549 43062	EMI 100MHZ 600R
5603	2422 549 44919	EMI 100MHZ 600R
5604	2422 549 44919	EMI 100MHZ 600R
5605	4822 157 11837	0,36µH 10% 5,6X5
5606	4822 157 11837	0,36µH 10% 5,6X5
5607	4822 157 62552	2,2µH
5608	4822 157 11837	0,36µH 10% 5,6X5
5609	4822 157 10686	CHOKE COIL 0,47µF
5610	2422 549 44393	EMI 100MHZ 2,7K
5611	4822 157 11837	0,36µH 10% 5,6X5
5612	2422 549 44919	EMI 100MHZ 600R
5616	2422 549 43062	EMI 100MHZ 600R
5618	2422 549 43062	EMI 100MHZ 600R

- DIODES -

6600	4822 130 11397	BAS316
6601	4822 130 30621	1N4148
6605	5322 130 34337	BAV99
6617	4822 130 82079	D3SBA20
6618	4822 130 34278	BZX79-B6V8
6619	3198 010 53380	BZX79-B3V3
6620	4822 130 11397	BAS316
6621	4822 130 30621	1N4148
6622	4822 130 30621	1N4148
6623	4822 130 34278	BZX79-B6V8
6630	4822 130 11397	BAS316
6631	4822 130 11397	BAS316

- IC & TRANSISTORS -

7600	4822 130 60373	BC856B
7602	9322 133 18682	AN7125P
7603	4822 130 60373	BC856B
7604	9322 150 74668	TDA7468D
7605	4822 130 60373	BC856B
7606	4822 130 60373	BC856B
7607	5322 130 60159	BC846B
7608	4822 130 41246	BC327-25
7609	4822 130 41246	BC327-25
7610	5322 130 60159	BC846B
7611	5322 130 60159	BC846B
7612	5322 130 60159	BC846B
7615	5322 130 60159	BC846B
7616	5322 130 60159	BC846B
7617	4822 130 60373	BC856B

ELECTRICAL PARTSLIST - POWER BOARD

- IC & TRANSISTORS -

7618	4822 130 41327	BC327-40
7619	5322 130 60159	BC846B
7620	4822 130 40995	BD438
7621	4822 130 40995	BD438
7622	4822 130 41327	BC327-40
7623	4822 130 40959	BC547B
7624	4822 130 60373	BC856B
7625	5322 130 60159	BC846B
7626	5322 130 60159	BC846B
7627	5322 130 60159	BC846B
7628	5322 130 60159	BC846B
7629	9352 621 95135	TDA3664/N
7630	4822 130 40855	BC337
7631	4822 130 41246	BC327-25
7636	5322 130 60159	BC846B
7638	5322 130 60159	BC846B
7639	5322 130 60159	BC846B

Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST - USB BOARD

- MISCELLANEOUS -

1701	2422 025 16747	SOCKET USB H 4P
1702	4822 267 10956	SOCKET FFC 7P
1703	4822 265 11535	SOCKET FFC 8P
1705	4822 117 11748	FUSE 2,2R 1206 5%

- CAPACITORS -

2701	4822 122 33761	22pF 5% NP0 50V
2702	4822 122 33761	22pF 5% NP0 50V
2703	4822 124 22726	4,7µF 35V
2704	4822 126 13879	220nF +80-20% 16V
2705	4822 126 13879	220nF +80-20% 16V
2706	4822 126 14583	470nF 10% 16V
2707	4822 126 13879	220nF +80-20% 16V
2708	4822 126 14583	470nF 10% 16V
2709	2238 586 59812	100nF +80-20% Y5V 50V
2710	4822 126 13879	220nF +80-20% 16V
2711	3198 016 31020	1nF NP0 25V
2712	3198 016 31020	1nF NP0 25V
2713	4822 126 13883	220pF 5% 50V
2714	4822 126 13883	220pF 5% 50V
2715	4822 126 13881	470pF 5% 50V
2720	4822 124 41796	22µF 20% 16V
2721	4822 126 14241	330pF NP0 50V
2722	4822 126 14241	330pF NP0 50V
2723	4822 126 14241	330pF NP0 50V
2724	4822 126 14241	330pF NP0 50V
2725	4822 124 22726	4,7µF 35V
2726	4822 124 22726	4,7µF 35V
2727	2020 552 94427	100pF 5% NP0 50V
2728	2020 552 94427	100pF 5% NP0 50V
2730	5322 126 11583	10nF 10% X7R 50V
2731	4822 124 22726	4,7µF 35V
2732	2238 586 59812	100nF +80-20% Y5V 50V
2733	5322 126 11583	10nF 10% X7R 50V

- RESISTORS -

3701	4822 117 12139	22R 5% 0,062W
3702	4822 117 12139	22R 5% 0,062W
3703	4822 117 12891	220K 1%
3704	4822 051 30102	1K 5% 0,062W
3705	4822 051 30154	150K 5% 0,062W
3706	4822 117 12925	47K 1% 0,063W
3708	4822 051 30221	220R 5% 0,062W
3709	4822 051 30221	220R 5% 0,062W
3710	4822 051 30221	220R 5% 0,062W
3711	4822 051 30123	12K 5% 0,062W
3712	4822 051 30123	12K 5% 0,062W
3713	4822 051 30123	12K 5% 0,062W
3714	4822 051 30123	12K 5% 0,062W
3715	4822 051 30123	12K 5% 0,062W
3716	4822 051 30123	12K 5% 0,062W
3717	4822 117 12925	47K 1% 0,063W
3718	4822 051 30223	22K 5% 0,062W
3719	4822 051 30223	22K 5% 0,062W
3720	4822 051 30331	330R 5% 0,062W
3721	4822 117 12706	10K 1% 0,063W
3722	4822 117 12706	10K 1% 0,063W
3723	4822 117 12706	10K 1% 0,063W
3724	4822 117 12706	10K 1% 0,063W
3725	4822 117 12706	10K 1% 0,063W
3726	4822 117 12706	10K 1% 0,063W
3727	4822 117 12706	10K 1% 0,063W
3728	4822 117 12706	10K 1% 0,063W
3729	4822 051 30222	2,2K 5% 0,062W
3730	4822 051 30222	2,2K 5% 0,062W
3731	4822 051 30471	470R 5% 0,062W
3732	4822 051 30471	470R 5% 0,062W
3733	4822 117 12925	47K 1% 0,063W
3734	4822 117 12925	47K 1% 0,063W
3735	4822 051 30221	220R 5% 0,062W
3736	4822 051 30103	10K 5% 0,062W
3737	4822 051 30332	3,3K 5% 0,062W
3738	4822 051 30332	3,3K 5% 0,062W
3740	4822 051 30474	470K 5% 0,062W
3741	4822 051 30474	470K 5% 0,062W
3742	4822 117 12925	47K 1% 0,063W
3743	4822 117 13632	100K 1% 0,62W
3744	4822 051 30273	27K 5% 0,062W
3745	3198 021 32250	2,2M 5%
4703	4822 051 30008	0R JUMPER

- COILS & FILTERS -

5701	2422 543 01243	OSC XTL 12MHZ 7P AT-49
5702	2422 549 43062	EMI 100MHZ 600R
5703	4822 157 11499	BLM11P600SPT

- DIODES -

6701	5322 130 34337	BAV99
6702	5322 130 34337	BAV99
6703	4822 130 11397	BAS316

ELECTRICAL PARTSLIST - USB BOARD

- IC & TRANSISTORS -

7701	9322 190 70671	UAC3553-B-QG-F5
7702	5322 209 82941	LM358D
7703	5322 130 60159	BC846B
7704	4822 130 60373	BC856B
7705	5322 130 60159	BC846B
7706	5322 130 60159	BC846B
7721	4822 130 42804	BC817-25
7722	4822 130 42804	BC817-25

Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST - MP3 BOARD

- MISCELLANEOUS -

1451	2422 025 17303	SOCKET FFC 19P

- CAPACITORS -

2450	2238 586 59812	100nF +80-20%Y5V 50V
2451	3198 017 41050	1µF Y5V 10V
2452	3198 017 41050	1µF Y5V 10V
2453	2238 586 59812	100nF +80-20%Y5V 50V
2454	2238 586 59812	100nF +80-20%Y5V 50V
2455	2238 586 59812	100nF +80-20%Y5V 50V
2457	5322 126 11583	10nF 10% X7R 50V
2459	3198 017 41050	1µF Y5V 10V
2460	2238 586 59812	100nF +80-20%Y5V 50V
2461	4822 124 81059	220µF 20% 4V
2462	3198 017 41050	1µF Y5V 10V
2463	3198 017 41050	1µF Y5V 10V
2464	2238 586 59812	100nF +80-20%Y5V 50V
2465	2238 586 59812	100nF +80-20%Y5V 50V
2466	2238 586 59812	100nF +80-20%Y5V 50V
2467	3198 017 41050	1µF Y5V 10V
2468	3198 017 41050	1µF Y5V 10V
2469	2238 586 59812	100nF +80-20%Y5V 50V

- RESISTORS -

3450	4822 117 12971	15R 5% 0,62W
3451	4822 117 12971	15R 5% 0,62W
3452	4822 051 30101	100R 5% 0,062W
3454	4822 117 12971	15R 5% 0,62W
3455	4822 051 30102	1K 5% 0,062W
3456	4822 051 30101	100R 5% 0,062W
3457	5322 117 13051	680R 1% 0,063W
3458	5322 117 13061	180R 1% 0,063W
3459	4822 051 30221	220R 5% 0,062W
3460	4822 051 30102	1K 5% 0,062W
3464	4822 051 30103	10K 5% 0,062W
3465	4822 051 30101	100R 5% 0,062W
3466	4822 051 30471	470R 5% 0,062W
3467	4822 051 30103	10K 5% 0,062W
3468	4822 051 30103	10K 5% 0,062W
3469	4822 051 30101	100R 5% 0,062W
3470	4822 117 12971	15R 5% 0,62W
3471	4822 051 30339	33R 5% 0,062W
3472	4822 051 30154	150K 5% 0,062W
3473	4822 117 13632	100K 1% 0,62W
3474	4822 117 12971	15R 5% 0,62W
3475	4822 051 30101	100R 5% 0,062W
3476	4822 051 30101	100R 5% 0,062W
3477	4822 051 30471	470R 5% 0,062W
3478	4822 051 30471	470R 5% 0,062W

- RESISTORS -

3479	4822 051 30102	1K 5% 0,062W
3481	4822 051 30101	100R 5% 0,062W
3482	4822 051 30471	470R 5% 0,062W
3483	4822 051 30101	100R 5% 0,062W
3484	4822 117 12971	15R 5% 0,62W
3486	4822 051 30101	100R 5% 0,062W
3488	4822 117 13632	100K 1% 0,62W
3489	4822 051 30103	10K 5% 0,062W
3490	4822 051 30101	100R 5% 0,062W
3491	4822 051 30101	100R 5% 0,062W
3492	4822 051 30105	1M 5% 0,062W
3493	4822 051 30103	10K 5% 0,062W
3494	4822 051 30103	10K 5% 0,062W
3495	4822 051 30103	10K 5% 0,062W
3496	4822 051 30101	100R 5% 0,062W
3497	4822 051 30103	10K 5% 0,062W
3498	4822 051 30332	3,3K 5% 0,062W
3499	4822 051 30103	10K 5% 0,062W
4450	4822 051 30008	0R JUMPER
4451	4822 051 30008	0R JUMPER

- COILS & FILTERS -

1460	4822 242 10989	CSTCV16,93MXJ0C3
5450	2422 549 43062	IND FXD SM 100MHZ 600R

- DIODES -

6450	4822 130 11411	BZX284-C3V3
6451	4822 130 11366	BZX284-C3V9

- IC & TRANSISTORS -

7452	3198 010 42310	BC847BW
7453	3198 010 42310	BC847BW
7455	4822 209 17108	LM317LD
7456	3198 010 42310	BC847BW
7458	9322 130 41668	M24C64-WMN6
7460	3198 010 42310	BC847BW

Note: Only these parts mentioned in the list are normal service parts.

ELECTRICAL PARTSLIST - VOLUME BOARD

- MISCELLANEOUS -

1200	4822 265 11207	SOCKET FFC 6P
1201	2422 129 16545	ROTARY ENCODER 24P
1202	2422 128 02917	SWITCH-TACT
1203	2422 128 02917	SWITCH-TACT

- CAPACITORS -

2201	5322 126 11583	10nF 10% X7R 50V
2202	2020 552 94427	100pF 5% NP0 50V
2203	2020 552 94427	100pF 5% NP0 50V

- RESISTORS -

3201	4822 051 30222	2,2K 5% 0,062W
3204	4822 051 30101	100R 5% 0,062W
3205	4822 051 30102	1K 5% 0,062W
3206	4822 051 30102	1K 5% 0,062W

- MISCELLANEOUS -

1006	3103 308 66991	PBAS USB PC LINK
1009	2440 257 40406	LSP 6R 10W OPN FULR R105S
1010	2440 257 40406	LSP 6R 10W OPN FULR R105S
1011 ⚠	3140 118 33701	TRANSFORMER AZ2558/00C/05
1011 ⚠	3140 118 33711	TRANSFORMER AZ2558/01
1011 ⚠	3140 118 33721	TFM POW EI-57 UL (-/17)
1012	2422 030 00374	CON NBM SUPP H 2P M TC08 B
1012	2422 030 00333	CON NBM SUPP H 2P M TC08
8006	3139 111 02331	FFC FOIL 18P/220/18P AD
8009	3139 111 02561	FFC F1IL 06P/280/06P BD
8010	3139 110 34100	CWAS FFC BD 04P 140
8011	4822 320 12752	7P - 180MM
8012	4822 320 12702	6P - 140MM
8013	3139 110 34650	FFC FOIL 05P/400/05P AD
8014	3139 110 34330	FFC FOIL
8016	3139 110 34740	FFC FOIL 08P/180/08P AD
8021	3139 110 34330	FFC FOIL

Note: Only these parts mentioned in the list are normal service parts.